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The JOURNAL *of* Real Estate Management

***of the* National Association of Real Estate Boards**

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Volume IV **May 1938** **Number 1**

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EDITORIAL

THE JOB OF THE PROPERTY MANAGER

PROPER management of real property is not merely a matter of bookkeeping and accounting—nor of advertising, purchasing, making repairs, signing leases, or evicting tenants.

Each one of these duties is important. Each one is complex and involves a high degree of technical knowledge and skill. But complete mastery of no one of them makes a man a *property manager.* These are functions of the technician, the researcher, the salesman, the negotiator. They are not executive functions. And the property manager is an executive.

It is his job to interpret, to plan, to coordinate, to direct, to supervise, to control. He must be familiar with technical processes; he must understand principles; he must know accepted standards of performance; and he must be skillful in handling people. It is doubtful if there is any other job under the sun that requires a broader knowledge or a higher degree of executive capacity than the job of the *property manager.*

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The **JOURNAL** *of*
Real Estate Management

Volume IV **May 1938** **Number 1**

A Modern Approach to Advertising

By JOHN W. SCHAEFLE

TWO men, discussing automobile accidents, came to this rather common conclusion—in so far as they were concerned, they had no fears as to their own driving abilities, but they were never sure of what the other fellow was going to do. Most accidents, very probably, arise out of that fact. People find it hard to know what the other fellow is going to do. This very thought, which makes us so sure of what we ourselves would do under a given set of circumstances, when applied to advertising, oftentimes leads to much needless waste of the advertiser's money.

But advertising is only a part and is inseparable from business generally, so that an understanding of the approach to business is the first essential to an appreciation of the problem of advertising. Business does not exist without a market, and a market does not exist without people. Success or failure of a business, in the final analysis, can be traced only to some phase of this problem of people. We ourselves have heard of two people with violently opposed views with respect to the same business institution. Their opinions were held with respect to the same store, the same merchandise, the same clerks, the same aisles, and the same elevators. But, nevertheless, one of them disliked the store to the point of never making any purchases there, while the other depended upon it for all of his purchases. The success of that store will depend upon the number of persons who think well of it—while its failure will lie in having too many persons with violent dislikes for it. Digging into the origins of the likes or the dislikes is going to disclose many amazing reasons for the opinions of these people. Whatever is done to correct a falling-off of business must be done at the source of the falling-off—and that source is people. Enough emphasis cannot be put upon this important consideration. We cannot say to ourselves too often: "People are at the root of my business—and it must be run to please them—not me."

Therefore, at the outset of this series of articles on real estate advertising, it might not be amiss to set our thinking along lines of what the other fellow thinks, rather than upon hard and fast rules of what constitutes good or bad advertising in the real estate field.

THE TREND OF PUBLIC OPINION

The Institute of Public Opinion, in a recent release, said that public opinion favored the Wages and Hours Bill and, in the same release, mentioned that public opinion was against any tampering or liberalizing of the Supreme Court. Both are New Deal measures. The release remarked further that over a period of months, during which the discussions in Congress were taking place with respect

This is the first of a series of articles on the subject of advertising, by Mr. Schaefle, which will appear in the pages of the *Journal*.

to these two pieces of legislation, public opinion changed very little. Neither arguments for nor against either of the bills made a great deal of difference in the percentages. Public opinion made up its mind, and there it rested. Only some overwhelming evidence or demonstration would have had sufficient influence to change public opinion.

Having the facts with respect to public opinion should determine the course to be set by legislators. Such facts as these—if related to business—should determine the course to be pursued by business. In other words, once public opinion has expressed itself, there is but one course to follow, and that is *with* public opinion. No one can swim against this tide. It moves with tremendous strength and energy. How important, therefore, that business know the direction of public opinion before ever a step is taken in policy-forming, selling, merchandising, or advertising! The businessman's finger on the pulse of public opinion is like the radio beam to the pilot in night flying—it keeps him on the course of making money and brings him to a "happy landing."

Such facts, which are becoming more and more the part and parcel of the thinking of politicians, business men, and advertising men, must be studied with equal seriousness by Realtors if they are to make the most of their opportunities. The past decade, with its problems both economic and social, has taught us that there is small reward in endeavoring to swim against the tide of public opinion.

Too often the Realtor gears his program of advertising to what he likes, rather than endeavoring to translate his product into words that will more nearly meet public opinion. He designs and writes his advertisements upon the basis of his likes and dislikes rather than in the terms of what a careful survey of public opinion might reveal.

The Realtor who thinks of the sale of a piece of property naturally allows many considerations to creep into his thinking which have no bearing on the problem as it presents itself to the possible buyer. He thinks of commission. That is inevitable, for that is his means of livelihood. He thinks in terms of a quick sale and how it might be accomplished. He thinks in terms of price—in relation to a quick sale, in relation to his commission, in relation to his knowledge of real estate. He thinks in terms of other factors too numerous to mention. And he sets out to write his advertising in the light of all of these considerations.

But how many of these considerations are in the mind of the possible buyer? Certainly, not commission. Certainly, not a quick sale. Doubtless, the purchaser is more interested in leisurely studying the problem of purchase. Price will be a factor in the buyer's mind, but his consideration of price, in nine cases out of ten, will not be based upon the same considerations as the broker's. So the problem confronting Mr. Broker when he sits down to write his advertisement is to determine as nearly as possible what is in the average buyer's mind with respect to property generally. Mr. Broker may feel that a piece of income property, while not showing a high net return now, has a fine chance for enhancement of value. Buyers in a particular market, however, may be thinking only in terms of net return, irrespective of future enhancement. All talk, therefore, of future enhancement will fall upon deaf ears. Divorcing oneself from the personal and knowing with definiteness the trend of the market prepare one for the important business of ad-writing.

Therefore, before ever a line of advertising is written or a series of direct-by-mail pieces is prepared, a careful check of the product to be advertised and its acceptance by the public should be made. True, after making such an investigation, it might be decided that the advertising was unnecessary and ill-timed, but valuable lessons would no doubt be learned, to say nothing of the saving of possible heavy expenditure.

Checking and Using Public Opinion

Nor is such checking very difficult of accomplishment. No matter how small the concern nor how limited the scope of the survey, if proper questions are asked and a proper cross section of the buying public interviewed, an average of informative public opinion will be secured upon which to base future procedure with respect to any given subject. Readers are probably all familiar with the test made by the university professor. He drew upon the blackboard a line exactly five and one half feet long. He then asked the thirty members of the class to write upon a sheet of paper their estimates of the length of the line, without, of course, consulting their neighbors. While individual variations in both directions were quite astonishing, it was discovered that the average of the thirty guesses was five and one half feet.

All of this may seem to be rather farfetched in a discussion of real estate advertising. However, business is learning that such laws of averages, applied to public acceptance of their product, have meant the difference between success and failure in their sales program.

When business learned, as it did a number of years ago, that women buy face powder upon the basis of smell rather than smoothness or purity, many an advertising dollar was saved.

The advertising manager may decide that the president of the organization is a handsome man whose face has sex appeal, and yet a careful check of the buying habits of the women might disclose that they are not in the least interested in the personal appearance of the president of the concern whose hose they may buy. It is better that the concern learn, through a careful survey, that women buy hose upon the basis of sheerness, or color, or texture, and then hammer home the news in carefully prepared advertisements.

Which Direction?

Examples without number are filed away in the archives of business. Advertising agencies everywhere can give you the classic examples of wrong approaches. Advertising which "pleased the boss" was run only to find that it did not please the public and, much to the discomfiture of the boss, had to be abandoned. In place of, "Have you had your iron today?" there was substituted the very commonplace, "Raisins taste good." The latter sold raisins, and the former did not. Why? Because the public just wasn't interested in building further iron content in its system. It was interested in pleasing its palate.

The Institute of Public Opinion, operating throughout the United States, is constantly on the alert to learn the direction of public opinion on various timely subjects. Compared with the total population of the United States, the number of persons engaged in this work of checking for the Institute is comparatively small. Yet, because of the care with which they check and the thoroughness with which each income group is covered, the results are astonishingly accurate. Recall, if you will, the poll of the Institute in the last presidential election.

Our sales force, meeting with the public daily and being made aware of the benefits to be gained by accurate knowledge of the people who are to buy our product, will bring home information of untold value to any organization. Advertising dollars can be saved if we know, from a specific group of people, for example, first, if they have a desire to own their own homes some day; and, second, whether they ever read the real estate classified columns of the local newspaper. I venture the guess that about 75 per cent of the people in this country want to own their own homes some day. I also venture the guess, however, that less than 20 per cent of the people read the classified columns unless they are specifically interested in a used car, a job, a used piano, or real estate. If these statements are true (and again you are reminded of the fact

that the above estimates are merely guesses), the Realtor who uses the classified column is not reaching the majority of his prospects, among whom is doubtless the buyer for whom he is searching. At the same time, his salesmen are passing, every hour of the day, valuable prospects who want to buy real estate.

Suppose, for example, that we knew that four out of five people at least wished to own their own homes sometime or other. Suppose, further, that we knew that they would buy a home if they understood perfectly how the financing could be arranged. Suppose that we knew for a certainty that public opinion had definitely set its mind upon country—or suburban—living. Or suppose we Realtors learned of a certainty that, instead of buying a new car, the public was saving money with which to make its down payment on a house. While I have no accurate knowledge as to the above speculation, I am aware of the fact that new cars are not being sold, and linked with it is the knowledge of the fact that savings deposits are increasing throughout the country. Wouldn't it be encouraging for the Realtor to know, for example, that the automobile is looked upon almost universally today as a means of transportation rather than a means of "keeping up with the Joneses"? Not many years ago people were buying a "better" car each year; "economy" lay in the direction of the yearly trade-in. That was followed by the era during which people were thinking in terms of two cars per family. Now it may be that people are thinking in terms of keeping the old car and using it merely as a means of transportation (which, of course, it is) and saving the difference against the day when the wish for home ownership can be fulfilled.

The conclusion is: The problem of advertising lies not in how to advertise a specific piece of property, but rather in knowing people's thoughts. After all, it is the public that is expected to read and be influenced by our advertising—it should not be written to please the executive staff.

This leads us to the cardinal necessity in the consideration of all advertising, namely, that it must be directed to the public—that it must follow as nearly as is humanly possible the trend of public opinion at all times. Manufacturers of national products test their markets before ever they begin production or to spend tremendous sums in building "consumer acceptance." They select a typical community and, by ringing doorbells, find out what housewives want. Thus, thousands of dollars in money and time are saved.

In the financial section of a great metropolitan daily a short time ago a picture appeared showing a nationally known manufacturer ringing a doorbell. A town in the Middle West had been selected for the test, and the executive, believing in test methods, was finding out firsthand what his advertising and salesmen would encounter when they began the national distribution of the product.

"WHEN THE MARKET IS KNOWN"

Advertising is a short cut to the public—but only a short cut when the market is known and when public opinion is accurately determined. Too often brokers do not finish the sentence. They say, "Advertising is a short cut." They fail to add, "when the market is known." If they stop with merely saying and believing that advertising is a short cut, many dollars are going to be wasted. When they add, "when the market is known," they are going to check and recheck that market in order to know what sort of advertising to run.

Wherein lies the best real estate market today? Take the market for homes, for example. Are the majority of people seeking an old house in which they can do a certain amount of remodeling and rehabilitation? Are they seeking the brand-new, modernistic house? Or would they rather prepare their plans and build a new home to their style and taste? I don't know.

But a sampling test, taken by real estate men everywhere, might save time and money in advertising and effort. We should know for proper direction of our advertising, to say nothing of mere money-making. An employee of the public library in Chicago has told me that a growing interest is manifesting itself in architectural books. People in all walks of life are spending time looking over plans and specifications as presented in volumes on that subject. She has stated further that their interest seems to be in remodeling rather than in new construction. I do not know whether this is a fact upon which Realtors can base their operations for the next few months, but it is enlightening and worth checking.

Following through with that idea, however, knowing certainly that people are interested in buying old houses and remodeling them for their own occupancy, sales organizations might make themselves ready to meet that sort of market with ideas, plans, and a wide display of merchandise. Salesmen are often discouraged from listing old houses because they may not be readily salable, to say nothing of the fact that the commission might be less than would be earned from the sale of a new house. However, if we knew that the trend of public opinion very definitely led in that direction, the commissions would take care of themselves. There is much to be said for the remodeling program. Generally, such houses are located in good neighborhoods where older families have been living over a period of years. The lots are often large and well wooded. Houses are generally well built. All of this, however, is speculation on my part; I am merely trying to point a way—indicate, if you will—a direction of thought for the Realtor before ever a line of advertising is written.

Since this article has been devoting itself to some speculative thinking, all with the view of assisting the Realtor in his approach to the problem of advertising, let us continue our ruminations. I have ventured some rather important guesses, none of which would I care to have any Realtor take for granted without a definite checkup in his own community. Lest he should, suppose we speculate in a direction opposite to that which has thus far been taken; suppose we take the record of foreclosures in a typical, large American city. Suppose that we consider a large eastern metropolis, for example, where the foreclosures over a ten-year period reached a peak of 40 per cent of all homes owned, or thereabouts. What influence, do you think, might such a condition have upon public opinion with respect to real estate? Might it not develop that there would arise an antipathy to real estate ownership, and might not a strong renting market supplant the sales market? Please bear in mind again that I do not know—I am merely speculating without the facts. But I am inclined to think that the Realtors of that metropolis might well endeavor to ascertain the facts for their own protection and for the sake of correctly directed sales and advertising efforts.

Air Conditioning and Summer Cooling

By FRED B. ORR

WITHIN the past few years air conditioning has become one of the most popular subjects of discussion. The probable reason for this interest is that people in all walks of life have felt its effect in theatres, restaurants, stores, and other commercial establishments. In most cases, it is true, this experience has been along the line of relief from the sweltering summer heat, but, in every case, it has resulted in an appreciation of the beneficial effects which are possible through air conditioning at all times.

Little attention has been given by the layman to the method by which these effects have been brought about, and very little understandable information has been available on the subject. The result is that a large number of people are thinking wishfully of the possibility of bringing the benefits of air conditioning into general use.

Our purpose is to furnish some definite and fundamental information on the subject of air conditioning so that those who are interested in having the most comfortable, healthful, and profitable conditions in their buildings will have some facts on which to approach the problem.

AIR SANITATION

It is a well-known fact that human beings can live for days without water and even weeks without solid foods. A period of a few minutes, however, is the longest any human can live without air. Our normal daily diet consists of approximately three and one half pounds of solid food, four pounds of liquids, and *thirty-four pounds of air*. Every scientific precaution has been taken to safeguard the purity and wholesomeness of the water supply and that of the milk and other foods required for our body sustenance. Health departments have been established and many laws have been passed to assure the public of protection along these lines. With the exception of ordinances and inspection efforts to eliminate smoke in the larger cities, practically no effort has been made in the direction of safeguarding the purity of the air in which we live and breathe.

NATURAL AIR SUPPLY

Up to a short time ago it was assumed that nature would provide us with an unlimited supply of pure air, regardless of the fact that we congregate in congested cities and pollute the air with every known form of impurity and debris. Let us look the facts squarely in the face. In the open spaces, air is not subject to contamination to any great degree; nature has provided the trees, shrubbery, vegetation, dew, rain, and sun for the filtration, absorption, and sterilization of the air to maintain its purity.

SUN EFFECTS

It is hard to improve upon nature at its best. At its worst, it is very easy. Man's task in the air conditioning field is to supply air at all times equal to that supplied by nature at its best.

It may be well at this stage to mention that the sun is the greatest sterilizing force in the universe and that man has to date found nothing which can even approximately substitute its beneficial effects. Under certain conditions, however, the benefits of the sun are frequently missing for days or even weeks at a time, and it is during these periods that air conditioning takes up the task of maintaining the purity and wholesomeness of the air in which we live to the highest possible degree. The sun's effects and those resulting from atmospheric conditions, therefore, should be kept clearly and definitely separated in our thinking.

City Air

When we consider the problem presented by the average large city, where dwellings, habitations, machines, and the elements combine to congest the surface of the earth and to pollute the atmosphere and where nature's correctives such as vegetation and the sun are not present in the necessary amounts to have an appreciable effect, it becomes apparent why air conditioning is looked upon as the next big step forward in the progress of the human race.

What Is Air Conditioning?

The American Society of Heating and Ventilating Engineers defines air conditioning as "the simultaneous control of the temperature, moisture content, motion, and physical and chemical constituents of the air to produce conditions most conducive to human comfort and health."

The most important word in this definition is *"control,"* which definitely assumes that, once the most desirable conditions are determined, they will be maintained regardless of the weather, air pollution, or other conditions. Stripped of all technicalities, we may therefore enumerate the objectives which air conditioning is to accomplish and to maintain.

Winter Air Conditioning:
- Heating.
- Humidification.
- Circulation and distribution of air.
- Cleaning and filtering.

Summer Air Conditioning:
- Cooling.
- Dehumidification.
- Circulation and distribution of air.
- Cleaning and filtering.

Certain functions of an air conditioning system, notably the circulation of air and its proper filtration and cleaning, are necessary the year round. It is obvious, of course, that in the winter time the air must be heated, whereas in summer the reverse is necessary; that is, heat must be removed. Similarly, during the cold winter months, most of the moisture is condensed from the outdoor air by low outdoor temperatures. When this air is brought indoors and heated to a normal comfort level, it actually has only a very small percentage of the moisture it could hold at this higher temperature, and thus it feels uncomfortably dry. Humidification, therefore, is necessary during winter months to make up the deficiency. At certain periods during the summer time the reverse is true. The air contains so much moisture that it does not permit the free evaporation of perspiration which is necessary to keep the body temperature uniform. Under these conditions the drying or dehumidification of the air is desirable to produce comfort conditions necessitating artificial cooling.

Order of Importance of the Various Air Conditioning Functions

During the past few years, practically every piece of equipment which performs in a small measure any of the functions previously indicated has been called air conditioning equipment. The ordinary electric fan which has long been popular as a means of providing air circulation and the radiator pan for the evaporation of water have both blossomed forth under various guises as air conditioning equipment. This has led to some confusion and doubt in the public mind as to the real significance of air conditioning. If our fundamental definition is kept in mind and the element of control is carefully considered, the value of any equipment offered as air conditioning apparatus can be definitely gauged.

To establish the relative importance of each of the functions of air conditioning, it may be well to consider each of them briefly in the light of our practical experiences, as well as in the light of the most advanced scientific thought.

Heating: Obviously, the process of heating stands out in everyone's mind as the element of first importance. Casual consideration of the progress of the human

race will show that before the discovery of fire and its control the human race was limited in its places of abode to tropical and semitropical regions where the temperature was naturally satisfactory. As man's control over methods of heating became more advanced, his sphere of operations enlarged to the temperate and variable temperature zones; today, facilities are available for maintaining comfort temperatures even under the extreme conditions existing at the poles.

In this country, heating equipment has been developed to a very high degree. Indeed, we have become so accustomed to a uniform level of temperature that a variation in indoor temperatures of even a few degrees is considered very uncomfortable and as a rule will not be tolerated. Close control and regulation of temperature are not only possible, but they are the usual thing, and, when considered in connection with air conditioning, absolute control is assumed. Automatic forms of heating lend themselves most readily to this accurate control.

Humidification: The discomfort resulting from the lack of humidity has long been realized. The parched lips, nostrils, and throat and, to some, the susceptibility to colds under these conditions have led to various attempts to solve this problem. Mute evidence of the undesirable effects of too dry an atmosphere is the warping and loosening up of furniture and other woodwork. A little consideration of this subject will convince one that the cost involved to humidify properly is usually more than offset by the increased life of the furnishings.

Another undesirable feature usually accompanying a dry atmosphere is the prevalence of a large amount of dust in the atmosphere. Clothing, draperies, rugs, the human hair, and even the human skin under the parched condition existing during the winter months combine to give off particles of lint, nap, and dust which tend to make the atmosphere even more undesirable.

Proper humidification will add to the life of all draperies and rugs, as well as reduce the amount of cleaning necessary. The medical profession and health authorities in general have for a number of years recognized the desirability of increasing the moisture content of the air during the winter months as an aid in the prevention of many respiratory ailments and the promotion of better general health.

Circulation: The comfort value of air motion has long been appreciated. Air in gentle motion has always been considered as that final touch representing the ultimate in comfort conditions.

About a quarter of a century ago when the study of personal hygiene was progressing rapidly, the general precept requiring an open window in all places of habitation took on somewhat the aspects of a dogma. It is quite likely that the crude heating apparatus then generally used, permitting the escape of noxious gases into the living quarters, may have had something to do with the development of this general practice of diluting the inside air with large quantities of outdoor air. Practical experience and observation have, however, very definitely shown that today those of us who still insist on an open window do so not because of any necessity for dilution of the air but rather to obtain a gentle air motion by permitting the wind to circulate the air inside of our habitations.

This is a very inefficient method of providing air motion. A very small electric fan will produce the same results and will not subject anyone near the open window to the discomfort and possible health hazards.

An open window is a very effective way of letting excess heat escape from a room if it accidentally becomes overheated. If it is not overheated, the open window simply permits useful and necessary heat to escape, thus requiring more heat for the proper temperature and entailing additional expense. While the thorough daily

airing of a residence may be a very worthy habit, the open window is beginning to be somewhat a symbol of ignorance. If we admit the desirability of air motion, it logically follows that this air motion should be continuous so long as the room is occupied. The amount of air motion under various conditions should be subject to variation and again absolute control. In the case of kitchens, ample exhaust must be provided for satisfactory results.

Air cleaning: Air cleaning is less important in the country where nature provides a maximum of natural filtering and sterilizing facilities. The nature of the foreign material or dust in the air is also probably quite harmless. In cities, men, machines, and conditions combine to pollute and contaminate the atmosphere with every type of impurity and microörganism. Under these circumstances, cleaning the large quantities of air in which we live and breathe ceases to be a luxury or virtue and becomes a downright necessity to peace of mind and health of body. The fallacy of opening a window to admit so-called "fresh" air becomes obvious. We simply, in so doing, admit more tons of debris and contamination into our places of abode.

Many people are peculiarly sensitive to the action of certain dust and pollens and become affected with what is usually described as hay fever when these ingredients are present in the air. Thorough filtering of the air has been found to be very effective as a direct method of relieving the irritation. Those of us not so sensitive, whose respiratory membranes may have become somewhat accustomed to the usual impurities of the air, may feel that we are immune to them. All of us who live in the cities are, however, constantly paying the penalty of poor health as a result of air-borne impurities.

Careful inspection of food at the factories is of little avail if in the process of delivery to and in our homes and eating places it is in contact with a polluted atmosphere. Accumulation of dirt and dust even where efforts are made to maintain absolute cleanliness is too well known to need comment. The thorough and effective filtering and cleaning of the air we breathe is a very essential part of the comfort and health benefits possible under air conditioning.

Summer cooling: Most of us living in the so-called temperate zone are inclined to welcome the summer after the rigors and uncertainties of winter and spring. We enjoy the sun and its comforting warmth. By midsummer, usually during a somewhat extended period of drought, when the sun has done its level best to parch the earth and dry up the strength of the inhabitants, we are apt to forget our early summer appreciation of the sun's warming rays. The simple fact of the matter is that, while all of us do appreciate the sun's beneficial effects, there comes a time when we feel we have had enough and long for relief.

For those in less than perfect health, the effect of continued hot weather is particularly irritating and in some cases is aggravating to the health condition. Of course, all work is made doubly burdensome and annoying under sweltering conditions. But even this could be tolerated if it were possible to find a haven of relief to recuperate, somewhat, our depleted energy and nervous reserve.

Summer cooling, except in commercial establishments such as theaters and other public places, is usually not thought of in the same sense as heating. When we think of heating, we think of maintaining a constant and uniform temperature, whether it be in our homes, or offices, or places of business. In comfort cooling, we aim to cool sufficiently to provide relief. For this reason, it is usually not considered necessary to cool all the rooms of a home, but rather to cool the living and dining rooms during the daytime and the bedrooms during the night time. In this way a haven of relief is offered at all times, and a good night's rest in a bedroom, cooled

sufficiently to make a restful sleep possible, will be very beneficial in permitting us better to withstand the high temperatures for the day following. When thought of in this light, room coolers provide a very desirable measure of comfort.

Dehumidification: Cooling the air 10 degrees or 15 degrees on a hot, sultry day, when the temperature is in the nineties, as a rule does not produce the comfort we expect. At the higher temperature, the air still had ability to absorb perspiration from our bodies because it could still hold more moisture. By cooling the air without removing any moisture, we bring it to a condition where it is practically saturated; as a result, it can no longer absorb perspiration. We then have a very moist, clammy feeling in which our clothing sticks to our bodies, and, if such an atmosphere is maintained for a considerable period of time, it becomes most oppressive.

Realizing this condition, all complete air conditioning equipment, as well as room coolers, are designed not only to lower the temperature of the air, but to remove a part of the moisture of the air so that the maximum of comfort is produced. This is accomplished by having the cooling surface at such a temperature that the moisture will condense on the surface much the same as a glass of cold water will sweat and remove moisture from the air on a sultry summer day. A good point to keep in mind is that moisture in the air in itself is not undesirable. As a matter of fact, a high moisture content of the air keeps our skin in the most pliable and healthful condition and also is beneficial to the delicate membranes in our oral and respiratory system. When a high moisture content of the air is combined with a high temperature, it is, however, extremely uncomfortable in that it does not permit our bodies to get rid of the excess heat by the normal processes of radiation, convection, and evaporation. Humidity regulation is more important than temperature regulation, and perfect comfort is experienced with 50 per cent relative humidity even with a temperature of 85 degrees in the space.

BENEFITS TO BE EXPECTED FROM AIR CONDITIONING

Many of us look hopefully to air conditioning to remedy a large number of discomforts and annoyances. We appreciate, of course, that it will be difficult to get the full advantages in our present homes and offices which were not designed with this thought in mind. In almost all cases, however, many of the advantages of air conditioning can be arranged at a reasonable cost. Buildings of the future will undoubtedly be so designed and constructed of such materials as to take full advantage of all of the comforts of complete air conditioning. A competent air conditioning engineer will be able to suggest many ways in which the comfort of our present homes can be increased. In summarizing, some of the benefits which we may expect from an air conditioning installation are briefly enumerated in the following.

Greater comfort: The one objective uppermost in the minds of all classes of people is the provision of the greatest possible bodily comfort. This desire is inherent in human nature. With air conditioning in the home, people of modest means may achieve greater personal comfort than that of kings and princes of only a generation ago, regardless of the wealth at their command.

Better health: While air conditioning is not in any sense to be considered as a cure-all for all bodily ills, yet a casual consideration of the intimacy with which air contacts and envelops our body, internally as well as externally, should convince even a skeptic of its importance in relation to health.

Greater cleanliness: It can be readily appreciated that if the tons of air which pass through our habitations daily were thoroughly cleaned, less cleaning and dusting would be necessary.

Increased life of furnishings: Draperies, rugs, decorations, furniture, and furnishings would not only have a much longer life under properly humidified and cleaned air, but would also keep that new appearance and require much less attention, cleaning, and laundering; furniture would not come apart, and pianos would not need tuning as frequently; paintings and tapestries would maintain their intended luster and finish; and books would not dry out and break apart. Combined, the extended life of these furnishings and equipment would in itself more than return the investment in air conditioning over the life of the furnishings.

The lower maintenance cost in cleaning and decorating, as a rule, completely offsets the operating cost, and, thus, greater comfort and enjoyment are obtained at no appreciable cost whatever.

Air Conditioning for Office Buildings

The type of air conditioning system to be selected for office buildings or portions of commercial buildings, such as restaurants and stores, depends upon many factors—geographical location of building, number of floors in height, square feet of area per floor, exposure to sun and wind, type of occupancy (totally occupied by one company or broken up into small suites for many different tenants), relative cost of power and water for condensing purposes, location of spaces to be air conditioned with relation to fan rooms and machinery rooms, etc., all of which can be evaluated only by an experienced engineer.

The complete air conditioning system must be capable of controlling indoor temperature, humidity, air motion, and air cleanliness in winter, summer, and in off-season periods.

Heating may be applied in the conventional form of direct radiators using steam or hot water, augmented with indirect heaters for tempering the air, or handled with indirect heaters only when properly zoned and under proper control.

Humidity may be added in the winter by means of water sprays, pan type humidifiers, or steam grid type humidifiers installed in the air conditioning cabinet.

Air motion may be controlled by circulating fans with supply ducts and grilles or circulating fans in small unit type conditioners.

Air cleanliness may be controlled by air washers and/or filters, either the automatic oil type, cell type, or unit throwaway type.

Refrigeration for cooling and dehumidifying in the summer may be applied in one of the following methods:

1. Application of direct expansion, refrigerating cooling coils directly in the path of air circulated.
2. The application of direct expansion cooling coils flooded with water, forming a Baudelot cooler, directly in the path of air.
3. The application of direct expansion coils in a chamber to chill water or the use of water vapor refrigeration to chill water, the chilled water being circulated to open sprays directly in the path of air.
4. The application of direct expansion to chill water or the use of water vapor refrigeration to chill water, the chilled water being circulated through fin type cooling coils placed directly in the path of air.

For cooling single offices or small office suites, automatic freon (F12) refrigerating units, applied as listed above under Method No. 1, are usually used. The direct expansion cooling coils are generally installed in small, self-contained air conditioners which consist of one or two small fans, cooling coils, heating coils, target sprays, and drain pan, enclosed in a finished casing selected to harmonize with the office furniture or woodwork. Systems of this type require a space on the same floor or on the floor below for the installation of the refrigerating equipment, or it may be installed within the cabinet itself. This equipment should be installed in a soundproof enclosure if surrounded by office space. This type of a system will cost the purchaser from $500 to $800 per room or office, depending upon the difficulties of application, size of space,

and other conditions. Air cooled units will cost somewhat less.

Where local codes require outdoor air ventilation, systems employing fans, ducts, air conditioners with outdoor intakes, etc. are usually installed. Refrigeration can be applied in any of the above methods.

Where conditioned areas require large central units installed on lower floors, Method No. 2, listed above, in many cases proves to be the most economical type in first cost and operating cost, although any of the methods may be used.

Where the spaces are located at various levels throughout a tall building, refrigeration is usually best applied in accordance with Method No. 4. This permits the circulation of water in a closed, balanced circulating system, eliminating the necessity of overcoming the static heads of the buildings and also pumping problems and gravity return problems from various levels which are encountered in the use of the open-spray system.

The open-spray system is applied in most cases where large central station air conditioners are installed on the lower or intermediate floors of buildings.

In general, the use of Method No. 4 permits the installation of risers throughout existing office buildings arranged to have plugged tees at various floor levels to permit taking off the proper amount of chilled water refrigeration in any zone at any level as required without interfering with the remainder of the system. This permits building up air conditioning throughout the various floors and zones of a building as required by new tenants, tenant changes, etc. The refrigerating plant may be installed in units as required to eliminate the high initial cost and to permit the gradual tenant requirements ultimately to pay for the air conditioning system.

The initial cost of the central station type air conditioning system in existing buildings usually runs from $1.25 up to $2.05 per square foot of rentable area to be conditioned, depending upon the type of installation required and the installation difficulties. These figures are based upon the assumption that a direct radiation heating system of some type is already in use for heating the building during the winter months with the air conditioning system equipped with indirect heaters to temper air for ventilation purposes and to be used in conjunction with the existing direct radiation system. Where large areas are to be conditioned, the cost per square foot for installation is usually in the lower bracket of the above mentioned range. For smaller systems of 5,000 square feet of floor area or under, the prices usually range in the intermediate or higher bracket.

The prices for the installation of air conditioning equipment listed directly above do not include any large construction changes, such as complete furring of ducts or ceilings, cutting and patching of finished partitions or paneled offices, etc. It is practically impossible to list approximate prices for this portion of the work.

The operating cost of an air conditioning system during the summer months when refrigeration is required, including interest and depreciation on the investment, varies over wide limits. This operating cost will drop considerably during off-season periods and in winter months when refrigeration is not required; it will, of course, also vary with local power rates and cost of water.

For purposes of estimating operating costs, each ton of refrigeration requires one horsepower hour of motor and two gallons of condensing water per minute. Depending upon the climate and other factors and application, yearly costs are based upon the use of the above quantities for from 600 to 1,200 hours per year for the cooling season. The ventilating fans if operated all year require additional electric power.

Periodical replacement or renewal of air filters is necessary, depending upon the condition of the outdoor air and the

percentage recirculated. The air ducts and grilles require cleaning at intervals.

The ventilating codes in most cities demand the introduction of from twenty to thirty cubic feet per minute of outdoor air per person, but, when this quantity is actually used, the size of the refrigerating equipment makes the cost prohibitive; therefore, recirculating of air is permitted. The limitation on this is due to odors from restaurants, smoking, etc., in which case plenty of outdoor air is demanded, regardless of the cost. The maximum of recirculation results in greatest operating economy.

For year-round conditioning, including all charges except steam for heating, the annual cost to own and operate a system will be from twenty to forty cents per square foot of area, depending upon the hours' use of cooling per year.

The time will soon arrive when places of public gatherings, such as restaurants, will find it a matter of necessity to provide summer cooling in order to retain their business. In the office and home its acceptance will be delayed due to present high costs of installation.

The items entering into operating charges are as follows: Assuming a 5,000 square-foot restaurant with a $10,000 system complete, of thirty-ton capacity:

Electricity: Maximum capacity in tons per hour×1 H.P.×.75×cost per kilowat hour×total hours per season×load factor per year: 30×1×.75×.02×1,600×.60=	$ 432.00
Water: 30 tons×2 gal. per min.×60 min.×1,600 hrs.×.60×$.10 per M. gal.	345.00
Filters, repairs, etc. estimated at	200.00
Fixed charges at 15%, including interest, depreciation, and taxes	1,500.00
Total charges (50¢ per sq. ft. per season)	$2,477.00

As will be noted, the largest item of cost is due to investment charges. Unless a system is well designed and incorporates the best equipment available, results will be unsatisfactory. Relatively few people as yet have the necessary experience to engineer air conditioning, and many failures have been registered.

Practical Thoughts in Regard to Summer Cooling

A summer air conditioning job in the most inexpensive form consists of a standard or built-up cabinet containing a motor-driven blower, an air filter, a cooling and dehumidifying coil (fin type), a drip pan, and drain to collect the moisture condensed out of the air. The motor-driven compressor may be built into this cabinet, making up a totally self-contained portable unit. This unit may be used as an all-year-round device if a heating coil and humidifier spray is incorporated within it; these may be of the electric-strip heater and vaporizer type.

A mechanical motor-driven refrigeration compressor, differing only in capacity and design from the conventional domestic electrical refrigerator, is almost universally employed today. If city or well water with a maximum temperature of less than 55 degrees is available at low cost, a compressor is not necessary. In order to condense moisture from humid air, there must be a source of "cold" several degrees below the dew point, otherwise nothing is accomplished except a slight lowering of the air temperature, the clammy, sticky feeling remaining. Dehumidifying is the most vital factor to be considered.

A compressor is necessary to compress the gas used in the cycle just as in the familiar air compressor. This highly compressed gas flows into a condenser fed by cold water, which cools the gas and brings it into a liquid condition still under pressure. The liquid is then piped to a coil in the path of the air to be cooled and enters this coil through an orifice in an "expansion valve." When liquids are thus expanded under pressure, they have the property of returning to a gaseous state if heat is absorbed from the air. This gas is then returned to the compressor and

condenser, where the heat absorbed from the air and compression is absorbed by the condenser water and wasted to the sewer. A rough approximation of the tonnage of a compressor is by the formula:

$$\text{Tons} = \frac{\text{pounds water per hour} \times \text{rise in condenser water temperature in degrees}}{\text{15,000 B.T.U. (one ton = 12,000 B.T.U. per hour + motor heat)}}$$

Refrigerant of 45 degrees in proper coils provides a proper ratio of air cooling and 50 per cent relative humidity. Lower temperatures are usually wasteful of power and water.

The conditions for which the average refrigerating plant is designed to be used in conjunction with air conditioning for office buildings are to maintain 80 degrees Fahrenheit, dry bulb, with approximately 50 per cent relative humidity in office spaces when the outdoor conditions are at the average maximum peak. For example, in most of the north central, northeast, or northwest parts of the country, the maximum of 95 degrees Fahrenheit, dry bulb temperature, and 75 degrees Fahrenheit, wet bulb temperature, are taken as the outdoor conditions. In certain southern sections, the outdoor would be 100 degrees Fahrenheit, dry bulb, and approximately 78 degrees Fahrenheit, wet bulb temperature, etc.

In addition to the proper heating, ventilating, and cooling system for complete air conditioning, it is necessary to have a proper temperature control system to coordinate the various parts and phases of air conditioning throughout the various seasons of the year. Each part of a system must be controlled and proportioned correctly with relation to the other parts if proper results are to be obtained.

Unit air conditioners, comprising a cabinet in which are embodied filter, cooling and/or heating coils, compressor, humidifier spray, and drain, are manufactured by many firms and are available in one-half-ton to one-and-one-half-ton capacity. These are generally connected through a window for some fresh air and to heating piping, electrical supply, water supply, and waste. They are usually portable and may be changed from one location to another. If heating is not desired, the cabinet becomes merely a summer cooler.

There are now on the market compact units using air for condensing on much the same principle as the domestic refrigerator, and these require only electrical connection. The moisture removed from the air through cooling is re-evaporated and discharged outdoors. Several adjoining offices can be served from larger unit machines by means of ducts if properly designed.

The unit conditioner has a field where the building is to be cooled piecemeal. Unless all tenants desire this service, a central system is not considered. The tenant may purchase these small units and remove them when vacating. Also, individual offices are able to control conditions independently of neighboring spaces. When considered for an entire building, it is probable that the unit system would cost much more than a complete job of central refrigeration.

The disadvantages should be mentioned. In old buildings, the electrical supply may be inadequate, necessitating new feeders; the water piping may be undersized; portions of carpets and flooring must be removed to conceal piping and conduits; and maintenance and filter renewal are an expense to be considered.

Each building should be given careful study for all methods of cooling, unit or central, and the type offering the most advantages should be selected. Reliable equipment and experienced engineering are essential to a successful outcome of any air cooling job, large or small.

The lowest priced installation is the so-called self-contained unit, but these seldom furnish complete satisfaction as compared with the more costly systems, being usually limited in size to one-ton capacity, corresponding to the removal of 12,000

B.T.U. per hour. These units generally are suitable for rooms up to 400 square feet in area, average sun exposure, one or two occupants, no smoking, and very little fresh air admitted. They are of great assistance, however, if their limitations are understood. For the water-cooled type, it becomes expensive to install and conceal water drains and gas pipes under floors, the units generally being placed on the outer wall and the plumbing usually being found in an inner wall or column. Many office buildings are deficient in water supply piping, and the result is overloading of the house pumping and house tank system. Therefore, unit coolers may be expensive to install, in which case the central type may be preferred where the refrigerating machinery is located in the basement and water is pumped to upper floors to unit coolers and blowers. The air cooled units recently developed are quite successful in certain climates, and the above objections are not present.

The type of equipment having been determined, it remains to calculate the size and capacity. This involves calculations of the heat loss from walls and windows, sun load, electric lights and appliances, heat from occupants, and moisture removal.

The so-called march of civilization introduces a circle by which we deliberately create uncomfortable conditions and then find a cure for them. This refers particularly to the universal demand for greater intensity of office illumination with its accompanying generation of heat, which must in turn be removed artificially by introducing cooled air in much the same way as we require acoustical ceilings to absorb the noise from mechanical office equipment designed for labor saving, but which is so noisy it is nerve-shattering. Outdoor noises demand insulated walls and double windows, which in turn bring mechanical ventilation in lieu of old-fashioned open windows.

Office buildings will be confronted with these problems with increasing frequency; each must be studied with great care or best results cannot be attained.

The services of an experienced engineer will save building managers many headaches. Some entertain the opinion that air conditioning can be purchased in package form, ordered from a catalog, and installed by inexperienced mechanics, but such is never the case. It is advisable to plan a progressive program for several years in advance and to design the immediate units in such a way that they will lend themselves to future expansion as the demand increases.

The Management Program

By JAMES C. DOWNS, JR., C.P.M.

TO the average person who thinks of a ship at sea, completely surrounded by hundreds of miles of water, the compass and sextant loom up as the blessed instruments by which a successful voyage is made possible. As a matter of fact, a sea captain, no matter how skilled in the art of instruments, cannot complete a successful voyage without a map showing the position of his destination. Knowing how to navigate is one thing; knowing your destination is another.

After learning something of the mechanics of *navigating* a property management problem, the next step involves the process of property management map-making—the process of *determining* your destination—*the management program.*

DEFINITION

In most businesses, as in nature, the problem of administration and care is first presented in miniature, in infancy; this is not so in property management. Buildings are born adult size, and the problem of their destiny is as great, is as sizeable, on the date of completion as it is ten or twenty years thereafter. In the light of the fact that the business of the property manager contemplates taking over properties in their entirety as of one specific date, the management organization must be equipped immediately to analyze the entire problem of management and to set up the ultimate objective to be attained through mechanics of maintenance, merchandising, and the routine practices of operation. The ultimate objective so conceived and the methods of obtaining that objective are known as "the management program" for the property. The management program is a road map through the economic life of the property, or through a period of that life.

NEW STRUCTURES

Because there are certain differences in the procedure of drawing management programs for new buildings and existing buildings, we shall first discuss the programming of new structures. In most instances, sound builders and architects will call in the property manager at the very conception of the property to answer several preliminary questions, such as:

1. What will be the nature of the improvement for the location in question?
2. What size units are most profitable? And what is the market for these units?
3. How long will it take to fill the proposed units? What will the original sales cost approximate? And at what price will the completed units rent?
4. Upon what scale should the new building be operated?
5. What will it cost to operate the building?
6. After analyzing income possibilities, operating costs, and capital charges, do you recommend the erection of a building?

It has been stated that a management program is "the determination of an operating objective as well as the mechanical processes of attaining that objective." In the case of a new building, the answers to the above questions will constitute a management program, as we shall see in the explanation of those answers.

NATURE OF THE IMPROVEMENT

What will be the nature of the improvement for the location in question?

The answer to the owner or architect will be: "industrial," "commercial," "commercial-residential," or "straight residential." To obtain this answer, the property manager must first make a neighborhood analysis and a neighborhood market analysis. If the development should be industrial or commercial because of present land use in the area, the answer will be

more or less obvious. If, on the other hand, it develops that the building should be commercial-residential (stores on the ground floor) or residential, the answer will lead to more questions:

1. To what use will the stores be put and what size should be planned?
2. Will the existence of stores materially affect the rental of apartments above?
3. How high should the proposed building be built? Should it contain a garage?

Taking the first of these subquestions, the property manager must analyze the trading area that will be served by these stores. He must learn from the concentration of traffic the present commercial worth of the location; he must visualize the front of the new property and the equipment of the stores (they will probably be air conditioned); he must determine whether the attractiveness of the stores will enlarge the present trading area; he must examine the parking facilities needed for an enlarged trading area; he must decide how much retail business will come out of the proposed building; he must determine the logical businesses for each of the stores (drugstore, restaurant, valet and tailor shop, delicatessen, barbershop, etc.); he must recommend store sizes best suited to these uses; and he must create a rental schedule for the stores.

Moot is the second subquestion: "Will the existence of stores materially affect the rental of apartments above?" The answer can be proved both "yes" and "no" from actual experience, yet in most cases the success or failure of apartments above stores has been entirely due to the management program. We know, for instance, that:

1. The entrance to the residential portion of a building should not be in the middle of the store frontage, but at one end of the property.
2. Apartments are successful over stores in most cases when buildings are erected on a corner and the entrance to the residential portion is on the side of the building.
3. Apartments are successful over stores in proportion to the over-all height of the structure.
4. Apartments should be built over stores whenever economic, yet the property manager who handles the apartments must be in a position to control the use and tenancy of the stores.

The question of height can be answered from neighborhood analysis. We know, of course, that the history of height in buildings is a history of concentration of population and of focalized demand. The cost of height in buildings is heavy, and the property manager can recommend height in buildings only after his market analysis and tentative rental schedule figures reveal a sufficient pressure to sustain costs. As for a garage in the building, it is very nearly safe to say that in any building of sufficient size it is economic to devote otherwise undesirable space to garage usage provided insurance rates are not thereby increased too severely.

Size

What size units are most profitable? And what is the market for these units?

From experience, most property managers have found that small units are the most profitable to operate. Moreover, property managers who follow sociological trends know that the average family size in the United States has dropped steadily for thirty years, indicating that small units are the soundest. As for the market on the various smaller sizes (one to five rooms), the property manager's market analysis will quickly reveal the occupancy situation in each size classification and the *base price* of each.

Time Required to Rent

How long will it take to fill the proposed units? What will the original sales cost approximate? And at what price will the completed units rent?

As for the time required to lease a new building, we can easily follow this equation:

$$\text{Time of leasing} = \text{Opportunity} + \frac{\text{Desirability}}{\text{Price}}$$

In explanation: The time of leasing

depends upon the number of persons given the opportunity to see the merchandise (prospects brought to the building) plus the desirability of the merchandise divided by the sales resistance of price. Prospects will rent apartments (after they have seen those apartments or their plans) only when they have become convinced that the *values* in the apartments warrant the expenditure of a certain sum of money.

Sales promotion, merchandise, and price are so thoroughly related to each other that we have included them in this one question, which, actually, involves three phases of the management program.

People (prospects) come to buildings only when their interest has been piqued by possible values to be found there. There are several ways of arousing this interest. We know that the very novelty of a new building in any of our urban centers today stimulates the curiosity of hundreds of prospects. There would be no problem in getting persons interested in your merchandise. On the other hand, if buildings were being built by the hundreds (as they were in the years 1921-26), this same curiosity would not be as concentrated. The property manager would be forced to turn to advertising, publicity, and other means to get prospects. As a result, sales cost would be increased and the time required for leasing would be longer.

In our consideration of pricing in new buildings, we caution property managers that price is based not only upon factors of desirability in location and in the building itself, but on factors of desirability in the unit itself. A property manager cannot price accurately proposed units in a new building until and unless he has a *complete picture* of the building, its apartments, and their equipment and design, as well as of the management program for the completed development.

SCALE OF OPERATION

Upon what scale should the new building be operated?

It is obvious that any conscientious property manager will recommend good physical maintenance for any property. Physical integrity should be maintained as a routine proposition. However, in setting up values in his merchandise, the property manager may wish to do more than simply provide good maintenance. He may wish to operate the property upon a deluxe basis, both as to service and physical equipment. For example: Should the building have a landscape plan, built around flowers and expensive shrubs? Should it have a doorman? Will the building provide venetian blinds or awnings? Should it have air conditioning?

The scale of operation in a proposed building can be based only upon one factor—the possibility of earning an adequate return on additional invested capital after providing for personnel and the proper maintenance and amortization of the equipment involved. The building should have a landscape plan, built around flowers and expensive shrubs, if the property manager is satisfied that such a plan will add to the profits of his operations over and above the original cost and maintenance of the flowers and shrubs. Economic possibilities alone *determine* the operating scale. Too many property managers are today planting flowers instead of grass because they want people to say: "Look at those lovely flowers around the buildings managed by John Smith." The manager who builds his own business at the expense of his clients has no place in the group of scientific operators. All property managers' buildings should look neat, but not necessarily extravagant.

OPERATING COSTS

What will it cost to operate the building?

After the operating scale for the building has been determined through study of merchandising possibilities, the property manager can estimate his operating costs. If we could transport ourselves back to the boom period and see some of the

estimates of operating costs prepared by our contemporaries, most current property managers would bow their heads in shame for their profession. There is no reason why estimates of operating costs from the plans and specifications for a building cannot be accurate within 3 per cent. There are two reasons why they were not within this range during the boom days: first, property managers as a group were not qualified accurately to estimate costs; second, in their enthusiasm to get the management of a proposed building, many property managers were too optimistic, if not deliberately false, in their projections of operating expense.

There is only one way to estimate costs of operation. That one way requires a *detailed* analysis of the property and/or its plans and specifications, plus knowledge of operating costs in existing buildings. And this knowledge of costs should be upon the basis of true denominators of cost rather than upon sketchy, inaccurate denominators. For example: Heating cost estimates must be based upon square feet of radiation; decorating costs, on square feet of wall area and openings; electricity costs, on power machinery and light outlets; elevator costs, on car mileage and height of rise rather than number of cars; linen costs, on beds and baths rather than rooms; and labor costs, on the work input required.

Each factor must be adjusted for the scale of operations. If the building is a deluxe apartment hotel, the operating costs must be adjusted to contemplate steam twenty-four hours a day, frequent linen changes, etc. Errors in operating cost estimates can be chargeable only to lack of knowledge, lack of patience in analysis, or lack of integrity.

The Decision to Build

After analyzing income possibilities, operating costs, and capital charges, do you recommend the erection of a building?

From his early determinations in market analysis and from his operating cost data, the property manager has reached two conclusions: The building will be profitable or it will not; the building is a sound improvement in the light of neighborhood trend or it is not. Let us suppose that the property manager discovers that the building is a sound improvement, that it will earn 4 per cent on the invested capital after allowing for all charges, including depreciation. What is the answer—to build or not to build?

The fluctuations in the basic economic condition of real estate have a distinct bearing on the activities of the property manager. This is particularly true in the formulation of the management program, whether for a proposed or existing building. The property manager must be informed constantly as to trends; he must be able to predict the future. As applied to investment of capital in new buildings or adding to the invested capital in existing buildings, this factor is extremely important. As applied to the problem of the building proposed above which the property manager's scientific estimates showed would earn 4 per cent net, the question is not so much *what* the building will return, but *when* the return can be procured.

Of the hundreds of thousands of residential buildings in this country which were earning 12 per cent return in 1925, there were very few which produced 4 per cent in 1933. On the other hand, buildings which produced only 2½ per cent in 1933 will conceivably produce 15 per cent in 1940, despite substantial construction which will be undertaken in the meantime.

Existing Buildings

Having examined those phases of the management program which apply to new buildings, let us direct our attention to the type of programming most common to property managers—the management program for existing buildings. Before pointing out generalizations applying to

this phase of the work, we shall present a case-study in management programming which will illustrate in concrete form the activities involved in setting up a program for a particular property.

> Problem—To prepare and execute a management program for the Beach Manor Apartments, located between 46th and 47th Streets on Lake Park Avenue in Chicago. Possession of the property and assets are turned over to the management organization on the day the problem is presented.

The above property represents a specific case. The following detailed report shows the step-by-step method of adopting a management program for the building as well as the mechanics of its operation.

Description of the property: (Note: The first step in evolving a management program is a complete physical examination of the building itself. Comparing the development of a management program again to navigation, we appreciate that no successful voyage can be made without a starting point clearly defined. The examination of the building and its physical condition gives us this starting point.)

The Beach Manor Apartments, although operated as a single unit, are actually two buildings built on either side of a court. Because this property is made up of two buildings, the court is open at both ends, one end on to Lake Park Avenue and the other on to the Illinois Central tracks. This latter end is partially closed off by a ten-foot brick wall in which are two arches leading to a passage at the Illinois Central end. The buildings are each three-story and English basement brick structures.

The south building contains forty-eight two-room units, three four-room units, and three three-room units. The north building contains twenty-four three-room units, three four-room units, and three five-room units. The decorative motif of the apartments is standard, with hardwood floors, mahogany woodwork, and papered walls in living rooms, dining rooms, and bedrooms. The dinette walls are canvassed and painted, the woodwork light.

The electric fixtures are suspended from the ceiling in living rooms, dining rooms, and bedrooms. Kitchen and bathroom fixtures consist of a decorated socket with no shade and are equipped with canopy switches (pullchain). Kitchen stoves are old and dirty; the sinks have no mixing faucets. Kitchens are equipped with cabinets and cupboards and General Electric refrigeration (two and one half years old). The exposure of the apartments is from poor to fair, several facing the rear of the lineal frontages and others facing the court. Both buildings have individual heating plants and individual hot-water boilers hooked to storage tanks.

Forty-one of the forty-eight two-room apartments in the south building are furnished, the building furnishing linens, maid service, gas, and light. As a matter of fact, the south building furnishes gas and light to all tenants (furnished and unfurnished). The building is equipped with individual meter loops for each apartment, but electricity is purchased on a master meter and furnished to all tenants. Nine of the three-room units are furnished as well as two of the four-rooms and one five-room. Even though the north building is equipped with gas and electric meters, light and gas are paid on all furnished apartments. Full hotel service is given on all of these larger units, the same as in the two-room units.

Physical condition: (Note: Because an intelligent management program must contemplate a restoration of good physical condition (rehabilitation), it is necessary to make a complete inventory of physical debility in order that the financial phase of programming may be budgeted properly.)

A close inspection of the physical condition revealed the following:

1. In addition to being badly neglected from a physical point of view, the building's public spaces are filthy—indicating poor janitor service.

2. The lawn in the court is completely gone—largely because of dog abuse and children playing in the court.
3. The hedging is largely winterkilled.
4. Forty-seven individual pieces of leaded basement and entrance hall glass are broken.
5. The entrance halls are fair in appearance, but the stair halls are badly in need of decoration; much of the carpet is worn.
6. The furniture in all of the furnished apartments is almost entirely worn out; very few of the frames are worth recovering. An estimate left by the former management indicated that $3,000 should be spent on twenty apartments.
7. The linen supply is inadequate. Laundry has had to be sent out and returned on the same day; most of the linen in use is ragged. The linen room is filthy, no system of shelving provided.
8. The floors in 75 per cent of the apartments in both buildings are ruined and in need of refinishing. The bad practice of varnishing floor borders around rugs has been allowed. The decorating in the apartments has been abominable. All calcimine surfaces have been topped; enamel has been poorly applied; and the upper walls of kitchens and bathrooms have been calcimined, not painted.
9. Much of the hardware on kitchen cabinets and doors is missing; very nearly all cabinet doors need adjustment. Window cords are broken on many apartment windows, as is a great deal of the glass.
10. Most of the toilet seats in the property are beyond reclamation; two out of five faucets are leaking, and one out of five needs replacing.
11. The rear porches of the building need paint; the roof needs recoating; and the parapet needs tuck pointing.
12. The boilers and water boilers all have serious leaks; none is efficient. Hot water production is poor; distribution is equally bad.
13. Eighty per cent of the wall and ceiling area in both public and private spaces needs decoration.
14. The office of the building is located in an open room off the street frontage of the property. All of the patrons of a beauty shop located on the first floor pass through the office in gaining access to and from the shop. An old desk and one or two disreputable chairs are the furnishings. Baby buggies, gocarts, and bicycles are stored in the office, which is used as a semistorage and receiving room. The walls are dirty, having once been painted a hideous green-grey. The lettering on the office door is partially worn off; the door needs refinishing, and its hardware needs replating.

Economic and merchandising condition: (Note: Because no program of management can be undertaken without a comprehension of the complete financial picture of a property, it is necessary that the next step in creating a management program be an analysis of the financial background of the building. Because future renting has a distinct bearing upon the future financial condition, it is also necessary to study the merchandising trend of the property, its present income, and present stability.)

As is the case in more and more properties each day, the ownership of the Beach Manor Apartments passed into the hands of the corporation as of the date of its assumption by our property manager. After paying the expenses of reorganization, paying up back taxes, etc., the new corporation had approximately $4,000 of free cash. When the building was taken over from the former agent, it was found that there were $2,600 in unpaid bills which would have to be met out of the $4,000 available. In other words, there was a $1,400 surplus which might be spent for rehabilitating the building.

A new loan had been placed on the property for reorganization purposes, and the fixed monthly occupancy costs were determined by the manager to be as follows:

Taxes	$316.50
Interest	160.41
Insurance	55.00
Corporate Expense	75.00
Mortgage Prepayment	145.83

If the corporation were to remain solvent, the manager would be required to produce a sufficient income from this property to pay all of its fixed costs and operating expenses, and, if the physical condition described above were to be corrected, the manager would necessarily have to earn an overage with which these corrections could be made.

Because of the declining desirability of its apartments (entirely due to physical

deterioration in the building and its furnishings), the gross revenue of the property had dropped from $2,900 to $2,100 per month in the year preceding its reorganization. This drop was almost entirely in rental value since it had been the policy of the former management to maintain high occupancy by cutting rents to whatever point such occupancy could be obtained.

Only six of the eighty-four apartments in the property were under written lease, all others being upon a month-to-month basis. Because the building was designed as an unfurnished structure (separate entrance halls served individual tiers of apartments), its tenancy upon a furnished basis was unsatisfactory in many respects. The lack of a common entrance made control of the units virtually impossible, tenant "skip" being almost a routine matter. Unless rents were collected promptly in advance, tenants in furnished apartments could pack their things and walk out of the building unmolested.

(Note: We now have before us all of the facts relating to the property itself; and the first three steps in creating a management program have been completed. The fourth step involves an estimate of the income and operating expenses of the property if its operating program is to remain unchanged. Because it was found in this case that it would be impossible to keep the corporation solvent if the present worn-out furniture were rehabilitated, the property manager determined that the possibilities of a changed operating pattern must be exploited, as must be the possibilities of obtaining regular income.)

Neighborhood analysis: (Note: In preceding sections of this article, we have discussed the factors of neighborhood and market analysis, and there is no need of repeating the theory of such analysis at this point. However, inasmuch as the next step in the creation of a management program for this case-study property involves making such analysis, we shall include hereinafter the data and deductions obtained.)

An analysis of the locale of the Beach Manor Apartments revealed the following facts:

1. From the point of view of inherent locational value (transportation, both public and private; convenience; and facility), the neighborhood in question is excellent.
2. From the point of view of population, trend, local development, etc., it was found that social deterioration has set in and that the area is largely peopled by white-collar groups in low-income brackets.
3. A market analysis showed an upward trend of occupancy in all of the room size markets (two-, three-, four-, and five-room apartments) served in this property. This market analysis further showed a six-year trend toward furnished apartments but no appreciable difference in occupancy as between furnished and unfurnished units. *Base prices* were established on both furnished and unfurnished units, and market analysis further showed that the units in the Beach Manor Apartments are very close to being *base units* when unfurnished and less desirable than *base units* when furnished.
4. A market analysis of adjoining primary rental districts showed that a vacancy in the more desirable rental districts to the south had reached a "point of shortage" with the result that rents on unfurnished units of comparable size in these more desirable districts had been raised rather substantially. Because these more desirable districts housed a large number of white-collar families in the low-income groups, indications are that economic pressure will force members of these low-income groups into other lower-rent districts. Because of the inherent locational desirability of the area in which the Beach Manor Apartments is located, it is logical to assume that the shift of this population will be into its district. Moreover, it is logical to assume that persons moving from better districts will insist upon relatively high desirability in the newly adopted district and will dislike particularly the cheapness of atmosphere in most buildings in the Beach Manor area.
6. The rental trend and price trend over a period of three years from date will most certainly be upward in the light of the above facts.

THE MANAGEMENT PROGRAM FOR THE BEACH MANOR APARTMENTS

With all of the facts relative to the

building itself, its neighborhood, and its potential markets now at hand, the property manager is ready to decide upon his destination. His decisions and his reasoning in each case are as follows:

Decision No. 1: The building must be gradually unfurnished.

Reasoning: The financial background of the building will not warrant rehabilitation of furniture plus correction of physical defects in the property. The margin of increased rent from the furnished apartments is not sufficient to maintain the furniture. There is practically no differential of demand between furnished and unfurnished apartments as revealed by a market survey. The six-year trend toward furnished units is obviously an outgrowth of the depression. This trend is being reversed by the introduction of overflow markets from more desirable areas where rents are being raised beyond the rent-paying ability of low income groups. The Beach Manor, if properly maintained, will be attractive to this type of renter.

Mechanics: It was at once obvious that for financial reasons the unfurnishing of apartments would have to be gradual. Since the two-room unfurnished market revealed the greatest weakness, two-room apartments will be the last to be unfurnished; three-, four-, and five-room apartments, the first. The furniture from apartments to be unfurnished will be used to piece out present deteriorating furniture, hence removing the necessity for furniture replacement purchases. The unfurnishing of some of the apartments will also enable the building to proceed without substantial linen purchases. As apartments are rented unfurnished, they will be placed upon a lease basis, and, in the north building, where meters are provided, tenants will be required to pay for their own gas and light. Inasmuch as *base rent* in the area is practically the same whether gas and light are furnished or not, this shunting of electricity payments onto the tenant will represent profit to the building. Pending completion of the unfurnishing of the north building, two-room units will be kept rented at present rentals in order to insure high occupancy and the income so vitally needed by the property.

Decision No. 2: The present office of the building (key point of first impressions) must be made to reflect a new desirability in the property.

Reasoning: Because the office of the building is the key point in the first impression of the property gained by the tenant, the present unattractive quarters much be changed.

Mechanics: Because zoning laws prohibit shops directly off the street, no street entrance can be cut into the beauty shop. The shop in the basement of the north building in violation of this law will probably be closed. The following plan can be adopted in order to change the first impression of the building. A partition wall can be built in the office of the building, cutting off the office from the foyer of the beauty shop. Linoleum can be laid on the floor; new lighting fixtures installed; attractive secondhand furniture purchased; Venetian blinds hung in the window; the entrance door painted black; its hardware and plates chromium plated; its lettering redone in silver; and its door frame painted white as well as the window frame of the foyer of the beauty shop. The office can be attractively decorated with bone-white woodwork, green walls, and yellow ceiling. A wicket can be installed in the wall between the foyer and the office, making it unnecessary for tenants to loiter in the payment of rentals.

Decision No. 3: Stairhalls should be redecorated and recarpeted as apartments off these halls are unfurnished.

Reasoning: Because the merchandising efforts of the building were to be concentrated on renting unfurnished apartments and because the character of tenants in unfurnished units is generally better than that of those in furnished apartments, it is believed desirable to redecorate stairhalls one by one as fast as the unfurnishing process in that hall is completed. This

method falls into line with the financial background inasmuch as work has to be undertaken upon a step-by-step basis out of income.

Mechanics: The carpeting from stair-halls to be redecorated and recarpeted can be used in patching entrances to two-room furnished apartments in order to keep their desirability at the highest point without the expenditure of money. Dadoes of halls redecorated should be painted in dark colors and upper portions of the halls papered with Wall-Tex, which is washable and most practical in the light of the lasting character of the tenancy in that hallway. Because of the nature of the area and the substantial demand for space in buildings of decent character, it is believed that no children nor dogs should be accepted, thus insuring, in newly decorated corridors, the absence of two major menaces of maintenance.

Decision No. 4: A new janitor is required.

Reasoning: Good janitor service in the past could have prevented many of the undesirable features now present in the building.

Mechanics: (Since the problem of selecting janitor personnel varies so widely in different parts of the country, this section of this management program has been omitted.—Ed.)

Decision No. 5: Maintenance must be introduced into apartments and public spaces.

Reasoning: Even though the financial background of this property indicates a dire lack of cash, it is believed that it would be better to go slow with the rehabilitation program than to proceed at a more rapid rate without entirely correcting previous poor maintenance.

Mechanics: The rehabilitation program in the apartments themselves should follow a pattern similar to that shown below.

1. A carpenter working for low wages should be called in to repair broken window cords, replace or repair bad hardware, adjust cabinet doors, hinges, locks, etc.
2. Because the walls in the dinettes are sagging away from the ceilings it is believed that a five-inch cornice around these walls at the ceilings should be installed by the carpenter.

The following equipment should be added in each case:

1. Inexpensive fixtures for bathroom and kitchen.
2. Chicago mixing faucet for the kitchen sink.
3. Inexpensive white toilet seat, new, inexpensive towel bars, glass holders, etc.

A common laborer could thoroughly wash and resize the upper walls of the bathrooms, dressing closets, and kitchens as well as all of the ceilings prior to sending the decorators into apartments. He could also remove the eight or nine layers of wallpaper on the living rooms and bedrooms. The decorative scheme should be simple, involving the papering of living rooms, stippling of dinettes and kitchens, stippling of upper walls in bathrooms, and enameling of baseboards in the kitchens and bathrooms. Stoves should be reconditioned and refinished, as well as the refrigerators. Again, because of financial limitations, light fixtures should be straightened, cleaned, and repaired where possible.

Decision No. 6: The court must be kept desirable.

Reasoning: Because all apartments face on the common court betweeen the two buildings and if desirable tenants are to be obtained and maintained, it is essential that the atmosphere within the court be kept in a satisfactory condition.

Mechanics: Two of the most undesirable features of the court are its use by children for loud play and by persons walking dogs. Notice should be sent to all parents and dog owners in the property, instructing them in a courteous way that the building will not tolerate further the abuse of the common court. Inasmuch as the tenancy (except the new desirable leases) is upon a month-to-month basis, it is within the power of the management to follow up this request by cancellations of tenancy. Again the financial limitations of the

management program will prohibit any substantial landscaping or the purchase of any shrubbery. In the light of this fact, the hedging should be removed and the ground turned and seeded by the janitor. Two loads of black dirt and a few pounds of grass seed will be required.

Decision No. 7: Leaded glass should not be repaired but replaced.

Reasoning: After analyzing the cost of repairing leaded glass windows it is believed that single plates of Florentine glass will be cheaper.

Mechanics: These should be measured, purchased, and installed by the aforementioned carpenter. Single plate clear glass should be installed in the entrance doors.

Decision No. 8: Persons living in presently furnished apartments may purchase the furniture if desiring to remain upon an unfurnished basis.

Reasoning: In the light of the almost complete deterioration of the furniture, it is believed that, when a furnished tenant is asked to vacate (because the entrance hall in which he is living is being placed upon an unfurnished basis), he should be allowed the privilege of continuing to pay the furnished rate, without maid service, linens, gas, or light for a period of one year, at the end of which the possession of the furniture would be vested in the lessee. This offer should be made only where it is felt that the tenant is desirable and is advantageous from the point of view of the management, thus involving no loss through vacancy, no turnover, and probably in most cases the possibility of delaying the floor refinishing, which is the most expensive part of the redecorating scheme, and installation of fixtures, faucets, etc. being put into rehabilitated apartments.

Mechanics: This matter could be handled by simply drawing the lease with proper conveyance of title to the furniture at the end of the lease term, provided no default had occurred theretofore.

Decision No. 9: The repairing of the roof, rear porch painting, and tuck pointing must be postponed.

Reasoning: Whereas physical inspection of the property revealed that the roof needs recoating, there are no present leaks. The manager of the building is fully informed as to the condition of the roof and is to watch the third floor apartments closely for evidences of leakage, at which time the roof will be patched. Because of financial limitations, in order to proceed with the merchandising end of the program, it is impossible to recoat the roof, to paint the rear porches, or to do the necessary tuck pointing. The program, however, definitely contemplates these maintenance corrections, and they are scheduled for the following year.

Decision No. 10: The cost of the electricity and gas in the north building will ultimately be paid by tenants and not furnished by the building.

Reasoning: As previously pointed out, our market analysis indicated that no increase in rent should be obtained for unfurnished units over the *base price* even if the lessor furnished gas and light.

Mechanics: Whereas the unfurnishing program will not reach the south building for six or eight months, it is determined that when the time comes the local light company will be asked to remove its master meter and install individual meters. Whereas during the early processes of unfurnishing this south building, the cost of master meter rates will amount to $30 per month, as apartments are gradually placed in the unfurnished class, the substantial amount now being paid to light tenants' apartments will be cut down. As for the gas, the cost of changing the south building from a master meter to individual meters is prohibitive. It is economical, therefore, in the light of this fact to contemplate the continuance of free gas in the south building.

Decision No. 11: The management program must be carried out under a strict budget.

Reasoning: Because every cent means so much to this property, waste through lack of control is inexcusable. Because some $800 a month has to be paid on occupancy costs and because an odd $1,400 is required for normal maintenance costs, rehabilitation can be undertaken only when cash has been provided through earnings.

Mechanics: By setting down each apartment's rental and allowing for the vacancy and credit loss indicated by market analysis (6 per cent), an estimate of expected income over the period of a year has been completed. Deducted from this income at the outset is the odd $800 required for occupancy expenses. The balance is the total amount which the management may spend for operating costs and/or rehabilitation. In the beginning of the month, the management deducts from this amount all fixed costs, including electricity, gas, pay roll, fuel, etc. If further individual expenditures are made, the amounts involved are deducted from the balance of each available so that at all times the manager on the property knows his cash position whether or not place had been reserved for expenditures. The building, therefore, is assured constant solvency and a rehabilitation program thoroughly rationalized in the light of available money.

The Floor Maintenance Problem

By W. C. WOODYARD

THE maintenance cost of floors should bear a relatively fixed percentage to the total decorating cost of a building. However, a broad survey will show that in actual experience a wide variance exists in relative cost over a period of years, running from a normal cost of around 10 per cent of total maintenance cost to as much as 25 per cent. The difference in cost represents the difference between sound and unsound floor maintenance. Furthermore, attractive floors and floors that may be cared for with a minimum of effort by the tenant are an important adjunct in renting and in keeping the tenant satisfied.

The objective of this discourse will be an effort to reconcile the demands of the housewife or tenant for attractively finished and easily maintained floors with the desire of the owner to accomplish this at a minimum cost that will protect or enhance his net return. The answer will be found in a study and an observance of the fundamentals of sound floor maintenance. Improvement in operating costs comes only from an intelligent study of the *details* incident to those costs.

Treatment of the subject will be confined largely to the maintenance of the exterior and interior wood floors in residences, apartments, and apartment hotels as this is the field where the greatest difficulty is experienced. The various types of finishes for exterior and interior floors will be treated in turn, together with the specifications and the advantages and disadvantages of such finishes.

EXTERIOR FLOORS

The use of pigmented surface coatings is usually restricted to exterior porches, outside steps, basement floors, garage floors, etc. of either wood or cement construction.

There are two types of pigmented finishes—floor paint and floor enamel—which are suitable for exterior wood and cement floors. Floor paint, being a long oil product, might withstand the weather for a longer period, but weather resistance is entirely secondary as both finishes, particularly in apartment dwellings, are worn off and require recoating before the action of the weather has any appreciable effect. Floor enamel has adequate weather resistance and withstands the continuous wear on porch steps, for example, somewhat longer than a floor paint. It has the added advantage of drying in one half of the time of that required for floor paint. Floor enamel produces a smooth enameled finish which is kept clean easily.

Here, as in all floor maintenance, the source of most of the trouble is neglect. Wood floors are disregarded until the finish is worn off and water is permitted to penetrate the wood, causing the boards to fray out and cup in the center. The soft part of the wood (which is usually pine) weathers out, and the hard part of the wood forms hard ridges which wear off more readily than would be the case if the smooth wood surface were preserved. As a result, the wood eventually rots, necessitating replacement of pieces and producing a less satisfactory wood floor from the standpoint of appearance and wear, as well as ease in cleaning. A well-kept and an economically maintained porch floor, particularly in apartments, is the exception rather than the rule.

It is a common practice in repainting floors and steps to specify one or two coats for the entire floor and step area, that is, providing for the same amount of finish on the worn areas as on the balance of the floor, which obviously is inconsistent. All of the worn areas and paths which receive the bulk of the traffic should be given a

bond coat mixed in the proportion of one quart of oil to each gallon of floor paint or floor enamel, which should be followed with two coats of floor paint or floor enamel. The oil added to the first coat helps to saturate and seal the weathered, frayed-out, worn spots in the wood. Usually, floors are allowed to go so long that they require touching up and two coats of floor paint or enamel. A sounder procedure is to touch up the worn spots and apply one coat of floor paint or floor enamel at more frequent intervals. The same specification is suitable for interior wood floors that are to be painted.

Cement floors, both exterior and interior, should be given two coats of floor paint or floor enamel without reducing the first coat.

INTERIOR WOOD FLOORS

There are two types of clear finishes or coatings for interior wood floors—the penetrating finishes and the surface coatings. Penetrating finishes may be classified as: (1) the nondrying oil finishes or mineral oil finishes; (2) the slow drying vegetable oil finishes; and (3) the hard drying vegetable oil finishes.

Although used somewhat extensively in the past, the nondrying oil finishes, such as the mineral oil finishes, scarcely merit discussion as they become exceedingly dirty and black and probably should be used only in a machine shop or similar place, where the main object is to lay the dust.

The slow drying vegetable oil finishes, varying in type from combinations of different slow drying vegetable oils to mixtures of vegetable oils with wax or varnish, are superior to the nondrying or mineral oil types of oil coatings but are generally deficient in their tendency to collect and hold dirt, thereby discoloring the floor.

The third type of penetrating coating, the hard drying vegetable oil coating, is superior in every respect to the other two classifications. While the penetrating quality of all penetrating oil finishes is often exaggerated, as the penetration is not over one thirty-second to one sixty-fourth of an inch, such penetration is adequate. A hard drying vegetable oil finish penetrates the wood and seals the wood, preventing fraying, and hardens, thereby resisting and curtailing the tendency of the wood to absorb dirt and discolor. Such a coating is particularly advantageous for use over a fine-textured, close-grained wood, such as maple which is used extensively in office buildings, institutions, and schools. The advantages of such a finish are less pronounced on an open-grained, coarse-pored wood, such as oak, although such finishes have been promoted and used for the finishing of oak in residential property.

The transparent surface coatings consist of such products as shellac, wax, lacquer, and varnish.

This type of finish is indicated for interior floor surfaces in homes or apartments where we have two primary objectives: (1) protection and (2) appearance or decorative effect.

It will be well to keep in mind that the first requisites of a surface floor finish are hardness, elasticity, and waterproofness—hardness to withstand the maximum abrasion, elasticity to prevent cracking and chipping, and waterproofness so as to be impervious to liquids. The appearance or decorative effect, while very important, is really secondary to protection. We know, of course, that, next to surface wear, the greatest deterring agency to the life of floors is moisture. When moisture comes in contact with bare wood, it raises the grain, and, when the surface is walked on, the fuzzy grain so raised is worn off. Subsequent moisture absorption raises more grain, and the process is repeated.

Upon the basis of this analysis, it is obvious that the hardest, toughest, and most waterproof coating obtainable will prove the most efficient. Accordingly, an effort will be made to analyze and to classify the various types of surface finishes, first, from the standpoint of wear resist-

ance or economy in maintenance and, secondly, from the standpoint of appearance or decorative effect.

Transparent Coatings

Shellac is made by dissolving shellac gum in alcohol to a proper brushing consistency. While shellac has good sealing and rapid drying properties, it is very brittle and is lacking in abrasion resisting qualities; also, being made of a brittle gum and cut cold in alcohol, it is lacking in elasticity and waterproofness. Shellac readily turns white when subjected to water.

Shellac, of course, has been popular with some painters because of its speed in drying. Usually the finishing of floors is the last operation in decorating a home. After completing the wall painting or papering, the painter washes up the floors; by the time he has completed shellacking a room, he can start applying the second coat.

While wax is sometimes applied to the bare wood, it has no appreciable durability in itself and is usually used as a polish or embellishing agent over shellac, penetrating oil, or varnish, but more commonly over shellac. A shellac and waxed floor gives an attractive appearing floor, particularly where one can be assured the floor will be regularly waxed and polished by the tenant, but usually in income properties the frequent waxing necessary is out of the control of the owner, and it is desirable to use something that stands up better between leasing and decorating periods. Furthermore, most owners are concerned with the safety factor; a great many accidents occur as a result of slippery waxed floors, and out of consideration of the safety factor, most insurance companies will not permit wax-finished floors in their buildings.

Clear lacquer finishes are superior to shellac in durability, washability, and toughness of film but are used very little in floor maintenance because of their extremely disagreeable odor.

The requirements of property management interests are very simple. They seek attractive floors that can be cared for easily by the tenant and maintained at a minimum expense by the owner. The varnished floor meets these requirements in a superior way and is generally recognized as the most satisfactory and economical floor finish. Despite this fact in many if not most cases, the results secured fall far short of what might have been secured if attention had been given to a few simple fundamentals.

The most essential requirement is that the floor varnish be applied directly to the past filler without an undercoating of shellac. In spite of the fact that this is the uniform recommendation of every well-known paint and varnish manufacturer and is endorsed by every competent source, it is undoubtedly true that a majority of the painters apply a coat of shellac before the finishing coat of floor varnish. So general has become this incorrect and unsound practice that it is not uncommon to see a specification calling for a coat of shellac followed by a coat of floor varnish in an architect's or a property manager's specifications.

The reason for this practice is probably accounted for by the fact that the finishing of the floors is the last step in the decorating of a house or an apartment. By the time the painter is finished shellacking one end of the room, he can start applying a second coat of floor varnish in the other end of the room. While this schedule admittedly makes for speed, it is a most serious deterrent to floor economy. In the first place, the shellac dries so rapidly that it does not have the adhesion or amalgam with the surface that is desired for long wear. In the second place, shellac is very brittle and incompatible with the qualities of toughness and elasticity that should be found in a high-grade floor varnish. As a result, instead of the varnish wearing down evenly under the constant tread of feet, the shellac foundation tends to shatter from underneath, and the finish gives away, particularly around

the doorways. As the film is broken in the course of wear, the process of deterioration is accelerated by the moisture and water attacking the shellac from underneath because shellac has practically no water resistance. A shellacked, varnished floor wears through more readily in the passageways and probably does not have one third the life or wear resistance of a properly varnished floor where the first coat of varnish is applied directly over the filler, thereby getting proper anchorage and forming an amalgam with the floor.

It is fundamentally important to use the most durable grade of floor varnish that it is possible to get to effect low floor maintenance costs. It should be recognized that the floor surface is subjected to more hard wear than any other surface in the home. A good floor varnish is very tough and elastic, resulting in extreme wear resistance; it is very waterproof and mar resistant; in fact, it combines more desirable qualities than any other type of floor treatment. It has a safety factor in being nonslippery, and the only care required from the housewife is an occasional washing-up with a damp cloth. A good floor varnish is light in color and dries sufficiently in four or five hours. A cheap floor varnish is proportionately lacking in the qualities discussed above, is usually dark in color, and is expensive rather than economical to use.

There has been a noteworthy advancement in floor varnish of rather recent date in the evolution of a satin finish varnish which has the wear-resistance and waterproofness of the gloss floor varnish but which dries to a soft eggshell luster, approximating the appearance of a rubbed or polished finish. From a property management standpoint, this type of finish is particularly desirable to use in the higher priced residences and in the deluxe apartments. It seems, however, that in the medium or lower priced apartments and residences the gloss finish has greater acceptance.

COLOR

Perhaps a word should be said about the color of the floors. Color has no particular bearing on the durability of the floor if the proper procedure is followed in producing the desired color and the floors are maintained properly and not allowed to wear through in spots.

A satisfactory range in color for most people is offered in the various shades of colored paste fillers available. Occasionally there is a demand for an extremely dark or almost black floor, which is accomplished by overstaining a dark-colored filler with a black or deep brown pigmented linseed oil stain. The so-called penetrating stain should not be permitted. Very dark floors should be avoided because of lack of universality of appeal, frequently resulting in an unnecessary complete removal job with the change in tenancy.

There is no denying the beauty or decorative precedent for a medium blackish-brown floor; at the same time there is no getting away from the fact that the vast majority of people prefer the natural finish. Offering a choice in floor color is establishing a dangerous precedent that is likely to prove very expensive, and only in the most expensive residences or apartments should it even be considered.

REFINISHING DIRECTIONS

Let us assume that we have a floor that has been subjected to every malpractice, such as the application of shellac under varnish, or the use of a cheap, dark-colored varnish, so that the only alternative is to remove the old finish and start all over again. Of course, that finish may be removed with varnish remover, neutralized, bleached as necessary, and recoated with two coats of good floor varnish. However, where sanding contractors are available, it has been found just as cheap to have the old finish removed with a sanding machine. This not only offers the advantage of getting a thoroughly

clean floor free from stain, but it produces a very smooth floor which will wear better. At every step we have to watch for evasions, and the first opportunity comes in the sanding process. Too frequently the sanding contractor will use two grades of sandpaper, instead of four grades, which results in a rough, feathered floor, instead of the very smooth floor desired. We quote below a sanding specification followed by a proper varnish specification:

Sanding:

The old, finished floors shall be sanded first with No. 4 or No. 3½ sandpaper, as required, to remove the old finish, followed by sanding with either No. 2 or No. 1½, and a third sanding with No. 1 or No. 0 paper, followed by final sanding with No. 00 paper. The final sanding shall be with the grain only.

When completed, floors shall be perfectly smooth, free from waves, sanding marks, feathering, etc.

Contractor shall be held responsible for any marring resulting from his work to the adjoining trim and wall surfaces; and in cases where the decoration is marred, the contractor shall be held responsible for its correction. All dirt and sawdust shall be removed by a vacuum cleaner or careful sweeping.

Finishing:

The floors shall be filled with paste filler, allowed to dry thoroughly, then given two coats of Floor Varnish Clear Gloss (or Satin Finish), allowing adequate time for drying between coats.

Upon completion of the work, the room shall be dusted if necessary, and all refuse and other traces of floor finishing work shall be removed.

You will note that two coats of varnish are specified in lieu of three coats. Three coats are preferable, but because there is very little difference in appearance between a two-coat job and a three-coat job, it is difficult to make certain whether three coats or two coats have been applied.

Having once put the floors in good shape, it is just as essential in the following years to give attention to the manner in which the recoating is done. This is all essential in building up and maintaining a floor that will be beautiful as well as wear-resistant and one which will not require the removing of the finish and recoating after a few years. It is common practice to revarnish over a floor that has been given a perfunctory wash or no wash at all, in other words, to varnish over the dirt. A proper specification for recoating is given herewith:

All of the oak floors, including stair treads, etc., shall be hand-scrubbed with steel wool and a strong washing solution to produce a *uniformly clean* finish. If worn spots exist, they shall be bleached clean with Oxolic Acid which shall be neutralized with alcohol, and then the worn spots shall be given one coat of floor varnish. When dry, the entire floor area shall be given one coat of floor varnish.

The purpose in sound, economical floor maintenance is to avoid the necessity of frequently removing the old finish. The necessity for premature removal is caused by any one of the following wrong practices: the use of shellac under varnish, the use of cheap varnishes, varnishing over dirt, failure to bleach worn spots, permitting the floor to go too long before revarnishing, and varnishing around the border instead of varnishing the entire floor. The last procedure is particularly bad because of the change in tenancy that is likely to occur.

Costs

It should be borne in mind that it costs about four times as much to sand and refinish a floor as it does to wash up and recoat a floor properly. If, therefore, a floor is unsoundly maintained in the manner as outlined above and should perchance have to be recoated each year (the surface being removed accordingly and refinished every fourth year), the annual cost of maintaining this particular floor would be just double what it would be under the sounder system, which obviates the necessity for removing and refinishing for a long period of years. In the extreme case listed above, the floor finishing would cost 30 per cent of the total average decorating bill instead of around 10 per cent, which a survey of units properly maintained over a period of ten years would indicate to be more nearly correct.

Some data on floor maintenance costs

are available in the city of Chicago where floor varnish is universally used for apartment floor maintenance. A survey of twenty-four buildings managed by one real estate company in Chicago, where the specifications herein outlined were meticulously followed, revealed that the floors had to be revarnished on an average of every two and six-tenths years, and they were maintained in an excellent condition. Experience has shown that floors maintained in this manner will not require resanding oftener than from ten to twenty years.

Inasmuch as the cost of refinishing or recoating with varnish is about the same as refinishing or recoating with any of the other materials mentioned herein, the length of the period between resanding and finishing and the length of the period between subsequent recoatings offers the best index to floor maintenance costs. Even if the floors were revarnished every two years on an average, which would be sounder in principle, it is obvious that the cost of floor maintenance in this instance is relegated to a minor item of decorating expense—as it should be.

In summary, it may be stated that floor maintenance costs, generally speaking, are far in excess of what they should be. For an answer to our problem, we should not look for some panacea or wonder-worker; we need to pay more attention to the simple fundamentals of floor finishing and to check carefully to see that these are carried out. If this is done conscientiously, floor finishing costs will automatically assume a relatively small percentage of the total decorating costs.

Lighting and Wiring

By R. B. PAUL

LIGHTING has been with us since Genesis. Therefore, we should know all about it. But man was a long time putting it to use. The caveman probably discovered that by seizing a burning ember, thus forming a torch, he could dispel darkness—which was of prime consideration; but it was not for some time that flame was used for cooking and heating.

Since light meant safety, man did not venture far from it. Although to a certain extent that fear has been overcome, it is still true that the degree of lighting determines the movement of man after dark.

Man evolved out of doors. We do not know exactly how long a period this evolution has covered, but let us be conservative and say one half million years. Let us represent this one half million years by twenty-four hours. That means that we have known lighting in any form for only about five minutes and, electric lighting for only five seconds. Our eyes developed under thousands of foot-candles, and their work was done at sunset. This was nature's plan, but man's plan is imposing an ever-increasing load on the vital senses. We now do our work indoors where from five to ten foot-candles are the average and then extend the use of the eye far into the night reading, going to the movies, going to night clubs, etc. Not only have we extended the use of the eyes, but we have given them far more intricate work than ever by reading small print and straining them in other difficult tasks.

Of all our senses, sight is the one by which we receive about 87 per cent of our knowledge and impressions. Therefore, we should study seeing in all its phases, but we shall limit our discussion to the consideration of only one of the components. Seeing is basically made up of four factors: size, contrast, time, and light. The study of light of necessity includes certain considerations of contrast, time, and size. It is easily seen that any one of the four has a very definite bearing on seeing. We cannot see objects very well which have approximately the same color or shade as the background. In our work-a-day world, the first three, namely, size, contrast, and time, are more or less beyond the control of the individual. The size of print, the color of the office stationery, and the speed of the piece of steel in the lathe are beyond control. Therefore, the only factor in seeing that can be varied with ease is the light.

Now, just what is light? It is obvious that we do not want to get into a long and involved technical discussion, so let us say that it is energy being radiated to which the eye is tuned. But let us go a step further because we need to know some other pertinent facts. What we call daylight is energy of a certain wave length, and these wave lengths correspond to colors. Daylight is made up of about equal amounts of red, green, and blue. When these three color lights are mixed together, we have white light.

FUNDAMENTAL PRINCIPLES

In the study of the fundamental principles, we shall go into only the facts in which we are interested—in other words, only those things which we can apply to our daily use of electricity.

The units of measure of electric energy are the watt and the kilowatt (1,000 watts). The use of any given number of watts for a given length of time is measured on your electric meter and is known as a kilowatt-hour. Some of the other common terms used in the electric field are horsepower (1 horsepower = 746 watts), amperes, and volts. Volts times amperes also give watts. It might be well to take a minute here to explain something of the watthour meter. It is a simple matter to read once the principle is known. You

read each dial, starting on the left, using the lowest figure to which the pointer is nearest. From there you read each succeeding dial in a similar manner. For example, let us take an instrument with which you are familiar—your watch. Here you have an instrument that has three dials on it: hours, minutes, and seconds. Let us say the hour hand is at a little past three; the minute hand is at a little past five; and the second hand is at forty-five. This means that the hour is past three o'clock. Therefore, we read the next dial or hand to tell exactly how much past three it is, which is twenty-five minutes; but the minute hand is also slightly past twenty-five. Again, instead of guessing how much past, we go to the next dial or hand, the second hand. Here we make a reading of forty-five. The electric meter is read in exactly the same way.

The basic fundamentals of electric units having been considered, let us pass on to those units with which we come in contact in the lighting of interior space. The first of these is the watt, which is used to mark the size of lamp bulbs, heating elements, etc. But a lamp marked 500 watts does not tell all we want to know about it. The next marking is the volts, of which we shall consider more later. Another thing we want to know about the lamp itself is the lumen output. The lumen is the measure of the quantity of light output as the watt is a measure of energy.

Let us go on now to consider some of the things that affect the lighting, such as glare. This is one of the negative factors in lighting. There are two kinds of glare, direct and reflected, and both have a distinct effect on seeing. An interior may have an abundance of light and yet be a very poor place in which to work and to see. We have no units by which glare is measured, but the eye will tell us when glare is present and to what extent it can be tolerated.

The glare of a bare lamp is most objectionable, and to do something about it brings up another point in the consideration of lighting. Basically, light is either reflected or transmitted. In either case we bring in some other material which affects the total amount of light received on the working plane. All materials reflect some of the light which impinges on the surface. For instance, clear glass reflects 7 per cent of the incident light, transmits 85 per cent, and absorbs about 8 per cent.

The following table gives reflection and transmission factors of some of the more common materials.

MATERIAL	REFLECTION FACTOR
Magnesium Carbonate (Chalk)	98 per cent
White Plaster	92 per cent
White Paint (Mat)	77 per cent
White Paint (Gloss)	73 per cent
Aluminum Paint	62 per cent
Mirror Glass	86 per cent
Chromium Plate	65 per cent
Aluminum Polished	62 per cent
Aluminum "Alzak"	87 per cent
Porcelain Enamel	65 per cent
Black Paint	5 per cent

MATERIAL	TRANSMISSION FACTOR
Clear Glass	87 per cent
Frosted Glass	83 per cent
Figured or Ribbed Crystal	80 per cent
White Glass Light Density	75-85 per cent
White Glass Heavy Density	10-45 per cent
Amber Glass	45 per cent
Red Glass	15 per cent
Green Glass	10 per cent
Blue Glass	5 per cent

Another consideration which is very often overlooked in considering a lighting problem is the inverse square law. This law is not as bad as it sounds. Let me give you a homely example. Imagine a sprinkler head at the same spot as the light; the water when turned on would spray over a given area. If the head were moved to a greater distance, the water would fall over a greater area, but not as much at any given spot. So it is with light; the amount on a given area varies inversely as the square of the distance. Thus, if a light source gives a unit of light on a surface at one foot from the source, it would give only one fourth of a unit to the surface two feet from the source.

It is easily seen that the above tables are of vital interest in that they point the way to better knowledge of things affecting light. This knowledge becomes of practical value to us in selecting ceiling and wall colors. No effort has been made to set up a table of reflection factors of paint colors because they vary so widely with various manufacturers. Only a few are given as an example: red reflects only 15 to 20 per cent; sky blue, 37 per cent; forest green, 20 per cent; shell pink, 54 per cent; etc. Practically all paint manufacturers now show reflection factors on their color charts; if these are not generally distributed, they are at least available for the asking.

You have all noticed that some rooms seem light while others with approximately the same size light bulbs appear dark. The reason for this is not only the color and shades used in the room, but also the size and shape of the room. Thus, a long, narrow room will require more wattage per square foot of floor area to get a given amount of light than a wider room. This is a reasonable conclusion when it is considered how one lamp aids the other and that noninterference of absorbing wall surfaces gives better results.

Design

The principle of symmetry binds all the preceding to that which follows and is the first fundamental in the consideration of a lighting problem. Before the lighting of any space is considered to any extent, the first step is to lay the space out as symmetrically as possible.

There are three types into which all lighting falls: direct, semi-indirect, and totally indirect. Let us consider each type in order. Direct lighting is the crudest and simplest type. It probably dates back to the origin of light usage, the open flame. We still see the effect of the old flame everywhere. In our homes we still have a great many candle type fixtures with bare lamps. In the offices, stores, and factories we have bare lamp bulbs all about. With flame as the light source we had to be careful, due to the fire hazard, and, therefore, could not shield the source or do much toward controlling the light. But we have advanced some, for now we use some kind of a reflector or shade over the lamp or enclose it in a white glass bowl, thereby giving an effect which does not strain the eye. Direct lighting is useful in its place, but it must be in its place. Direct light from a lamp bulb is desirable in a jewelry store; there we want the direct reflected glare from the diamonds, polished silver, cut glass, etc. It is desirable in a factory to inspect polished surfaces for scratches, etc. Direct lighting can also be used in stores if the lamp bulb is enclosed in a white glass bowl so that the surface brightness is not too great. This is possible because the eyes in this kind of establishment are moving about and, therefore, do not feel the effect so greatly. But here again we have to be careful of too much glare and harsh shadows.

Direct lighting does have the advantage of being more efficient. With it, one watt per square foot will produce approximately five to six foot-candles when the lamps are approximately seven feet from the working plane. With the bare lamp, white glass enclosing bowl or reflector, over 50 per cent of the light is thrown directly down; enclosing bowls are designed for various sizes of lamp bulbs. These sizes have been determined so that the bowl brightness is comfortable.

12-inch bowl for 150-watt lamp
14-inch bowl for 200-watt lamp
16-inch bowl for 300-watt lamp
18-inch bowl for 500-watt lamp
22-inch bowl for 750-watt lamp

Semi-indirect is as the name implies. In this type 60 per cent or more of the light is thrown up. Semi-indirect is the happy medium between direct and totally indirect. The amount of light transmitted will depend on the density of glass used in the bowl. The luminary for this type of lighting can be found in both the open top and

closed top. In the closed top type there are usually two layers of glass on the bottom of the bowl with only one layer of clear at the top.

The totally indirect system throws practically all of the light up to the ceiling by means of reflectors, made of opaque materials such as mirrored glass or metal. The luminous bowl type is also classed as totally indirect although about 10 per cent of the light is allowed to filter downward. This merely serves to offset the contrast between the dark bowl and the well-lighted ceiling. With indirect lighting, the ceiling becomes a secondary light source of large area and low brightness. Shadows now become very soft, and glare is at a minimum. Light colored walls and ceilings are essential to this system of lighting to reflect the maximum amount of light. However, no matter how good the maintenance or how light the surface, some light is lost by absorption, necessitating the use of higher wattage lamps to produce the same quantity of light on the working plane as with direct lighting. To get some comparison with the direct system, one watt per square foot will produce approximately one to two and one half foot-candles; or, in other words, double the wattage is required to produce the same quantity of light.

The choice of lighting system to be used depends on the particular conditions which have to be met. Cost and efficiency are factors which may limit the choice, although the tendency today is to make good lighting the first consideration. Dust and dirt in the air and dark-toned walls and ceilings in factories, warehouses, and basements practically dictate the use of a direct lighting system. In residences, offices, and public buildings the lighting equipment should be made to harmonize with the decoration and architectural features; semi- and totally indirect systems are generally used.

We must always remember that the primary function of any system is to provide quantity and quality of light to meet the visual requirements. If this is not done, then, no matter how beautiful the luminary, it is unacceptable.

LAMP BULBS

We shall not go into the subject of lamp bulbs to the full extent because volumes have been written on this subject, but we shall consider some of the things that are useful in everyday work. The manufacturers have certain letters and figures which designate certain lamps. "PS" is for pear shape, which is one of the most common. The "A" shape is similar, but the neck is somewhat shorter. "G" is for globular; "T", tubular; "F", flame; etc. A G-40, for example, is a globular shape bulb, 40/8 inches, or 5 inches in diameter at the largest point. A 100-watt A-21 is "A" in shape and 21/8 inches in diameter.

Lamps are finished in various ways, such as clear, inside frosted, white bowl, colored tints, colored glass, etc. One question often asked is whether the inside frosting does not cause great loss. The answer is that it does cause some loss, approximately 2 per cent, but it increases the apparent light source and reduces glare. Another thing to remember is that colored lamps do not give full amounts of light due to the absorption of the color. This is approximately the same as the reflection factors of colors.

There are ten or eleven different bases on lamps, but only three of these are common: the mogul, medium, and intermediate. All lamps from 300-watts to 1,500-watts have mogul bases, and those from 200-watts down to 25-watts have medium bases. Small decorative lamps use the intermediate socket.

INDUSTRIALS

As has veen previously stated, the system of symmetry is one of the basic principles of wiring and lighting. The way in which the lights are laid out will depend upon the use to which the space is going to be put, but, in general, a bay twenty feet by twenty feet should have four outlets

Recommended Foot-Candles

TABLE I

LIGHTING APPLICATION	FOOT-CANDLE CLASSIFICATION	TYPE OF UNIT	REMARKS
Stock storage inactive space	3- 5	Reflector direct.	Arrangement should conform to storage conditions.
Warehousing and active storage	5- 10	Reflector direct.	Consider special stock bins.
Corridors, stairways, toilets, washrooms, etc.	3- 5	Reflector direct.	
Rough manufacturing	10- 15	Reflector direct.	Layout and wiring should be adequate for higher intensities.
Medium manufacturing	15- 25	Direct reflector with diffusing bowl.	Layout and wiring should be adequate for higher intensities.
Fine and extra fine manufacturing	25- 50 50-150	Direct reflector with diffusing bowl for general, plus special local.	Good general plus special local which controls direction, diffusion, and color quality.
Craneway	12- 20	Direct high bay.	Prevents waste on side walls directing light efficiency to work plane.
Small stores	15- 20	Direct enclosing bowl—semi-indirect and indirect.	Capacity for higher intensities.
Large stores	15- 50	Direct enclosing bowl—semi-indirect and indirect.	Extra circuits for case and special displays.
Showcases Show windows	30-100 75-300	Special reflectors.	Standard with manufacturing—easy to install.
Office building lobbies, corridors, toilets, washrooms, etc.	5- 10	Ceiling type direct enclosing bowl.	Some convenience should be provided.
General offices	15- 25	Indirect, semi-indirect, and direct enclosing light.	Low brightness and absence of glare are desirable where units are within line of vision.
Private offices	10- 25	Indirect and semi-indirect.	Low brightness and absence of glare are desirable where units are within line of vision.
Drafting rooms	25- 40	Indirect.	No shadows.
School rooms	15- 25	Indirect, semi-indirect, and direct enclosing bowl.	Similar to offices.
Homes, apartments, lounges, etc.	2- .5	Semi-indirect.	Should provide for decorative local and high intensity local for reading, sewing, playing cards, etc.

equally spaced. In some instances, lights are spaced four in one bay, and two in the next. This is known as a two-one spacing and is carried out each way. A rather simple rule to follow in the spacing is that the general lights should not be any farther apart than one and one fourth times the distance from the floor to the bottom of the luminary. In most buildings, completed prior to about 1920, it is diffcult to revamp the original wiring system to deliver up-to-date illumination, due to small wire, too few circuits, and inadequate outlets. It may be, and usually is, an economic advantage to the owner to assume part of the cost of new wiring that satisfies the immediate needs and provides reasonably for growth.

STORES AND OFFICES

In commercial establishments the same general rule holds in regard to symmetry. The amount of light required will depend upon the location. Shops in the downtown sections require three to four times as much light as small outlying shops. But in any case, commercial space which is wider than sixteen feet should have two rows of lights. This is something that is overlooked most frequently, but when one stops to consider the fact that the merchant always sells his goods along the sides of the store, rather than in the center, it is easily seen how impractical it is to place the maximum amount of light in the center of the store. The outlets in the ceiling should supply the general lighting only, and no other outlets should be on this circuit. Not over three outlets should be on one circuit, and no smaller wire than No. 12 should be used. There should be one circuit for general illumination for each 400 square feet of floor area. A window should have one circuit for each five linear feet of glass for general illumination and at least one duplex convenience outlet for each five feet of glass for special spots. There should be provided in the baseboard one duplex convenience outlet for each fifty feet of floor or platform area. There should be a convenience outlet on each column in stores; if there are no columns, the outlets should be spaced down the side wall and approximately fifteen feet apart. It is advisable not to put more than six outlets in a circuit. The outlets for wall and show case lighting cannot be placed with any degree of accuracy unless the store arrangement is known, but an approximate location can be used and a capacity of 60 watts per foot of case provided.

Practically all commercial establishments now want and use some kind of sign, and provision should be made for it. If four positions in the panel board are left unused and a one-inch conduit is run up to the face of the building, the sign can be installed without much difficulty. It might be well to say here that, in my opinion, it is false economy for the owner or manager of a property to allow the tenant to install all the electric work. It is far better to come to some kind of an agreement whereby the owner pays a portion and in this way has something to say in the matter, thereby getting the most practicable installation, which will remain and save further tearing up of his property.

In providing for office lighting, the same advice as given above holds true. In those cases where very close work is to be done, one circuit should supply only 200 square feet of floor area. The convenience outlets can be supplied upon the basis of one for each 800 square feet of floor area with the exception of small offices which have 400 square feet or less. Here, the convenience outlets should be spaced approximately twenty feet apart around the wall with at least one on each wall.

The lighting and wiring in residences and multi-family dwellings is a problem of trying to supply something to suit individual taste, and I am not at all sure it can be solved. There are, however, some things that common sense dictates should be done. Each and every room should be supplied with a ceiling fixture that gives ade-

quate light and which is controlled by a switch at the main point of entrance and egress. In one-family residences, as well as small flats and apartments, it is very convenient, if not imperative, that each room be supplied on at least two circuits. In this way, if there is any trouble and a fuse is blown, there is some light in the room. This is also the reason for supplying those convenience outlets to which are likely to be attached heavy current consuming devices on a separate circuit. There should be a convenience outlet on each wall in all the major rooms, and on long walls there should be one at least every twelve feet.

Wall brackets, if used, should be provided with some kind of protective shades for eye comfort, and they should not be placed in the center of wall areas where they are likely to interfere with the placing of furniture or pictures.

In buildings which have a changing tenancy, the fixtures should have simple lines of good taste and give adequate light. If sufficient convenience outlets are provided, the decoration with portable lamps will be taken care of by the tenant.

WIRING

The question of wiring is so broad that it is impossible to cover all of it, but there are some thoughts which are pertinent to our consideration. The buildings in which most of us are interested have been up for some time; therefore, the wiring is of a standard of a past decade. Most architects plan a building for a useful life of approximately thirty years; yet, during its life, we think nothing of making many alterations in partitions, floors, and windows. However, many structures are still in use in which the wiring has not been revised since completion.

If one could see into the future, it would not be as difficult to make provisions for adequacy in wiring. It is a well-known fact that the electrical demand of any structure is at least 50 per cent greater today than ten to fifteen years ago, yet the feeder and circuit capacity has not been increased. It was not until around 1910 or 1911 that it became a general practice for new structures to be wired for electricity. For some unknown reason, and in the absence of any other standard, the electrical contractor used the "Code" as a bible.

There are actually two codes which govern the wiring in practically all cities, towns, and villages—the National code and the City Code. The National Code is a compilation of *safety* rules for installing electrical wiring. It is compiled by the National Board of Fire Underwriters and has no thought other than the elimination of hazard from fire and shock. Let us take a minute here to see just what this means. Standards of carrying capacities of various sizes of wire have been set up; as an example, the Code states that the safe carrying capacity of a No. 14 wire is fifteen amperes. So far, this is good, but it does not tell us that if this fifteen-ampere load is at 200 feet from the feed, we shall get a tremendous voltage drop, and, in consequence, the lamp, motor, or heating element will not be working at full efficiency.

The local code is usually the National Code verbatim, with a few additions to fit local conditions. The Chicago Code has gone a step further and does give some rules which tend to make for adequacy.

Here is an example of what can be done and is being done every day to an unsuspecting and uninformed public. A short time ago I had occasion to look over a job in a small store that had just been completed. The new tenant had opened up his business in a fairly good location but was not satisfied with his lighting for which he had just paid good money. Upon inquiry, it was found that three contractors had bid on the work, and, as the tenant and owner both had had no experience, there were no specifications and each contractor made his own. As a result, the lowest bidder got the job; he installed nine outlets in each window, with the run approxi-

mately sixty feet, using No. 14 wire; 100-watt lamps were the maximum that could be used, which were not enough for the location. The point is this—although the contractor lived up to his agreement and abided by all the codes, the results were not satisfactory.

TYPES OF WIRING SYSTEMS

There are only two basic types of wiring—open and enclosed—but each type has several subtypes. The most common type of open wiring is the knob—or cleat. In this type, the wire is exposed to many hazards. The only advantage of this system is its cheapness of installation. This system costs approximately 60 per cent less than the conduit system. Another system which is used, and which is an improvement on the open system, is the non-metalic loom. Here the wire is enclosed, but this loom does not offer much protection.

The metal encased, or conduit system, is being used more and more. In fact, in the larger cities, it is the only type that is approved. Here the wire is pulled through iron pipe which protects it from mechanical injury and which is also a protection against fire. There has recently come onto the market a conduit which has a thinner wall than the old style and which does not have to be threaded to make a connection. It is claimed that it can be installed at a cheaper rate than the older type.

There is a new system which has not been very widely used. It is known as the bare neutral system. Here the ordinary wire with rubber insulation is wound with a bare copper wire which is not only used as a ground wire but also as protection against mechanical injury. This is a rather simple and easy system to install, and it is also claimed to be very cheap.

CAPACITIES

The capacities of the various feeders, panel boards, and branches are of utmost importance, as this is the bottleneck through which all, or at least most, of our difficulties arise. It is impossible to set up tables which will answer all present and future problems but some general outline can be established to serve as guide posts. The feeders for lighting and power should, if possible, be separate. It is not so difficult to take care of power feeders as the motor load is less changeable; a tenant does not change motor sizes very frequently.

The feeders should be of such capacity to supply each branch circuit with nine amperes and do this with a voltage drop of not more than 1.5 per cent. If the open type of wiring is used, it is advisable to use the next size larger wire than is just necessary and to provide sleeves in the floor so that new risers can be installed with the minimum expense. For the feeders that are installed in conduit, it is advisable to install a conduit that will permit a stepping-up of the wire size (over the size to be then installed) by at least two standard gauge numbers if future needs so dictate.

The subfeeds and panel boards should be in proportion to the feeder size. It is common practice to save on these two items and thereby seriously impair the whole system. Panel boards should be so placed that the length of branch circuits will not exceed sixty feet. It is convenient, but not absolutely necessary, to have a switch for each branch circuit at the panel board. But, in any case, the board should be large enough to install one additional circuit for each five circuits, or fraction thereof, which it contains.

As has been stated, the branch circuit should not be more than sixty feet in length to the last outlet on the circuit. No smaller wire than No. 12 should be used, and the voltage drop should not exceed 1.5 per cent at the end socket with full load on. In this vicinity the better jobs are going in with not more than four outlets on a pair of No. 12 wires, and quite often the three-wire system is used with only four outlets for the three wires. In the larger buildings the branch circuits should be so

arranged that they feed, as nearly as possible, only one bay area or at least some section that is a unit of the permanent structure. In this way the changes of partitions, etc. made necessary over a period of time will not require major wiring changes. In some of the new structures, a system of running the branch circuits to the ceiling adjacent to the column has been used. In this way alternate columns have four pull boxes around them, and, then as partitions are added and rooms laid out, small metal oval raceway is used in the plaster to feed out to the individual outlets. By using this system, only minor changes ever need be made if the runs from the column to panel board are of adequate size.

Poor and inadequate wiring causes losses to both the owner and the tenant. These losses are due to fires caused by overloading and by an energy loss in the wire. It is not known with any degree of accuracy just what the fire loss is, but it is a tremendous sum of money each year. The energy loss is also incalculable, but here are some very simple rules to remember which will aid in saving money. The loss of light due to voltage drop is approximately 3 per cent for every 1 per cent drop in voltage, while the energy loss is only 1½ per cent for each 1 per cent drop in voltage. If the wiring is inadequate, you are paying for energy which is used up in heating the wires in the conduit which is not only useless, but also hazardous.

The costs of wiring will vary throughout the country to such an extent that figures will not be given here, but some basic economics do apply everywhere. It is considered sound to figure depreciation upon a six-year basis. It can easily be seen that if this figure is used, the total cost of lighting, including depreciation, interest on investment, maintenance, first cost of wiring and fixtures, and lamp renewals, will run only about 2 per cent of the plant pay roll.

The same sound economics can be applied to office buildings and commercial structures where rent for space runs from $1.00 to $3.00 per square foot and the average pay roll cost of employees is $15 per square foot; it is not unreasonable to pay fifty cents per square foot to make the entire space useable through the installation of good lighting.

The Job of Management Prior to the Opening of a Project

By JEAN COMAN

WHAT IS MANAGEMENT?

WE are first concerned with a definition of management—many have tried to define it, and I don't think there is any one answer. Ordway Tead says, "Management is the art of getting things done." Good management of anything, whether it be a factory, a university, or a housing project, involves planning, doing the work, and then evaluating the job when it is done. Adequate planning also involves coordination of ideas, and, if successful, the job will be carried out with dispatch.

Before we can discuss the job of management prior to the opening of a public housing project, let us be sure we are talking about the same thing when we say "management." Management and the manager are not identical in public housing.

THE "OWNER" IN PUBLIC HOUSING

Because the owner must manage his holdings, let us give some thought to the owner and his purpose in building the public housing project. If the owner were a private business man or corporation, the building would be built for profit. It might be managed by the owner himself; he might engage a management concern to operate it; or he might hire a manager to operate it. In public housing projects the owner is the government, whether it be Federal, state, municipal, or a combination of these three. In a democracy the government exists only to administer the will of the people. Federal housing projects have been built and operated in accordance with the Acts of Congress, such laws having been passed by the people's representatives, who voted the use of public money for the purpose. The reasons for these projects were stated in the laws t enabled the housing project to be buil

Thus, we see that the real owner public housing project is remote sometimes heard from only when thi go wrong.

The first large-scale public housing p gram was authorized under the Natio Industrial Recovery Act, and it was dertaken to put men to work. The ow through his representatives, had not p vided for public housing, as such, but a means of work. The objectives of pu housing, as now specifically set forth the United States Housing Act of 19 have been adequately outlined by Warren Vinton, Chief of our Project view Division.

The Federal Government is somew of a grandparent by now, with munic housing authorities throughout the l ready to provide the second generatio projects. And be assured that he is re and anxious to see that the new offspr has a good beginning.

THE EMERGENCE OF POLICIES

In the first projects Congress did stipulate the cost, the rent, who might in the new homes, nor even attempt to who should manage them. Only after first buildings were well under way, some ready for occupancy, did the o er's representatives, Congress, pass George-Healy Act fixing certain poli of management. It was left to a sm group of pioneers in Washington to r the owner's mind—public opinion, if will—to determine the policies and to tablish procedures for the managemen a brand-new public institution.

Thus, planning for the management Federal housing projects began even fore the qualifications for the manag

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could be agreed upon by those housing experts who would acknowledge the title in 1934 and 1935. And, fortunately, the conception of management in this infant public service has developed, changed, and is still changing.

When Does Management Begin?

Management begins or should begin when the project is planned. The resident housing manager may not be employed, for economic or other reasons, when the site is selected or when the architects make the first blueprint. But experience shows that the *management point of view* must be considered from the day the project is first mentioned. The owner should know clearly how the project is to be built, for whom it is to be built, approximately what the rents will be (which means estimating the operating costs, a difficult task), and how it will be managed. When the architect designs the project, he should have the advice and suggestions of managers who have struggled with the operating problems that result from faulty design and materials.

There are some experts who say that the architect for a public housing project should have lived in one before he attempts his design. Others say that the architect of monuments and public office buildings is rarely qualified to design homes for living by the same token that the professor of sociology seldom is a good lecturer on psychology. What you or I might consider ideal housing may not please the low-income occupants of a public housing project.

However, it is generally agreed that the architect must have practical assistance from management to decide whether to design flat roofs or pitched; closets with or without doors; to include hardwood or asphalt tile floors; front or back porches; central or individual laundry space; a community building or several small social units; and so on through the list of problems confronting the individual who wishes to plan a project to suit the people who will live in it. No homes, before the New Deal's housing projects, were ever built on an amortization of sixty years. Operating costs on a sixty-year basis presents a new property management problem. Those of you who have managed property, try to guess your coal bill for sixty years!

May I say in passing that many of the mistakes of design, now freely admitted, could have been avoided had a housewife's hand been laid on the plans. Women know that closet space, storage room, and the kind of work space in the kitchen are determining factors in good or bad homemaking. A woman knows this, not because she is a woman, but because her job as housewife and homemaker, with children to feed, clothe, bathe, and train, has taught her to manage her part of the home life efficiently if she is to be a success. We have found that the husband generally likes the new home if his wife is happy in it. We frequently hear, when we are renting, a husband say to his wife, "You are the one to spend the most time here, so make up your mind."

I wish to make a thorough discussion of tenant selection and renting, but I shall first comment briefly upon three topics: "Management looks at the structural details of the buildings"; "The project as a part of the city and neighborhood"; and "The rents—management's part in determining them."

Management Looks at the Building Process

It is imperative that management, and at this point it should be the *manager*, be familiar with the structural details of the building. This knowledge can best be gained by observing the construction from the time the first hole is dug until the "For Rent" shingle is out. It is the opinion of many managers that thousands of dollars can be saved in operating the building if they can be on the job to see the pipe lines laid, to watch the coats of paint cover the walls, and to observe the installation of

all equipment. Then if there is trouble—and there are sure to be difficulties—they will know where to look and will be in a position adequately to supervise the repairs. If the manager is not employed early enough to work with the construction department in the selection of materials, equipment, and general design, then surely a management division in a central office or some management person should cooperate in the determination of these matters.

THE PROJECT AS PART OF THE COMMUNITY

I need hardly say that a thorough understanding of Federal, state, and local laws and ordinances is basic to the efficient management of public housing projects. It is quite as important to realize that a housing project is only a *part* of the larger city and community. If it is located in a slum neighborhood, it must not be like an oversized diamond in a worn-out, fragile, and ill-conceived setting. The manager must see that the jewel blends into its setting. It is most important that a manager know his city—its social, health, recreational, and educational resources—in order that the project may be integrated with and take its natural place in the life of the city at large. With this knowledge of the city, the manager can be of maximum service to his tenants in their adjustment to the new neighborhood. Continuous contacts with neighborhood and city leaders and the establishment and maintenance of their good will, which comes from understanding, will be vital to the manager. The tenant of a public housing project must not think himself to be different from the neighborhood, nor must the neighbors think him to be different. He is not a recipient of charity.

MANAGEMENT AND THE RENTS

The job of renting and management after occupancy will be much easier if the manager has an ear to the ground and eyes in the back of his head to correct misunderstandings, lack of information, and to break down opposition on the part of the public. Remember, public housing is new. Did you ever hear of it five years ago—ten years ago? The manager must do something about this lack of information, misinformation, and lack of understanding. And after he has done it, he must continue to evaluate the results of his campaign against public ignorance.

Managers in public housing projects will seldom have the power to determine the rents because they will be determined by the financial setup. However, the management must know that the contemplated rents are within the reach of the families for whom the project is being built. In the first demonstration projects, the rents were determined by the initial cost of the project plus operating costs, less the subsidy fixed by Congress. Under the new United States Housing Act of 1937 the project will be built to suit a predetermined rent. But the manager is the one to decide whether there will be any difference in the price of units of the same size, and on what basis these differentials are to be made. Again, what you and I prefer may differ from the tenants' preferences.

In the majority of our Federal projects, wholesale utilities are charged to the tenant as a part of his rent. (May I say from this point on I shall have reference solely to the Federal projects that are now operated, occupied, or in the process of being occupied, not to the new program under way by local Housing Authorities.) It has been demonstrated that this method of including utilities in the rent is cheaper for the tenant and more satisfactory to him. However, it is difficult to explain to the general public and to many applicants that the shelter rent and utilities, which together are now termed rent, cannot be compared to the shelter rent alone which most of them pay. For example, suppose a family now paying $20.00 a month rent applies at a project where it finds the rent to be $23.25 a month for the three-

room house it wants. The immediate reaction is that the rent is too high. Upon questioning it is found that the present cost of heat (for a coal stove in one of the three rooms occupied) plus lights, cooking fuel, and ice (for about four months a year) will come to around $74.00 a year, a minimum estimate for a southern city. Prorated monthly, this makes the family's rent and utilities $26.00 against $23.25, which it will pay for heat, cooking range, adequate lighting, refrigeration and refrigerating energy, cooking fuel, and hot water three hundred and sixty-five days a year. The explanation that the family would really save $33.00 a year and have more for its money readily sells the applicant. But we know that there are many in need of housing that never apply because they do not understand this comparison.

Importance of Publicity

This brings me to the importance of adequate publicity prior to renting. We find that the old adage, "All I know is what I read in the papers," still holds true. A more powerful, rapid, and effective means of spreading the news is the old back-fence method. It takes months to correct one false statement appearing in the paper, and one disgruntled applicant can discourage ten prospective tenants.

Where certain ideas about public housing projects originate seems to be a mystery. However, when the same rumors and identical misinformation pop up in Nashville, Tennessee; Enid, Oklahoma; New York City; and Milwaukee, Wisconsin, there is cause for thoughtful analysis.

The following rumors have been heard in nearly every city where a project has been built: "You can't have visitors"; "You have to turn your lights out at a certain time"; "You will be inspected every day"; "You must move out if you get a raise in salary"; "You can't hang pictures on the walls"; "You can't have a car"; "I hear they will tell you how many children you can have"; etc.

In my opinion these rumors develop because the average working man thinks of his Government as a restrictive force and, therefore, that the homes will be restricted because the Government has built the housing project.

The applicants know that there are certain "Standards of Eligibility"—a staggering phrase! Because the project is large, is governmental, and to some looks like an institution, it is not hard to see why people imagine there will be restrictions such as "lights out time," "can't have a radio," "can't have a washing machine," etc. Since there are no garages, it is not unusual that applicants should assume cars will be prohibited. They are told that only a certain number of persons can occupy a given size dwelling; therefore, it is not farfetched to assume that the Government will control the birth rate. The word "investigator" or "investigation" is associated with relief. If investigated before they move to the project, they probably reason that this investigation will continue after they move into the project. Newspapers have often stated that tenants will be required to keep their new homes clean. Editorial comments have predicted that project homes would be new slums in a short time. There is nothing illogical in the deduction that tenants will be frequently inspected. But of course these rumors are all false.

Necessity for Education

It is clear that there is an educational job to be done, not advertising in the commercial sense, but a matter of giving the public the facts about the purposes of the project, the requirements for occupancy, and a picture of what life will be like once a tenant has entered his new home. It means saying these things again and again in simple language and in many different ways. The laws of learning are very binding in this work. You may even have to educate the owner, which is the public, for the average citizen must realize that it is his product which is being

marketed. He should know in concrete terms what return he is getting on his investment. He will understand a dollar value, but through education he will come to appreciate that the human values of better health, improved family life, and a general lifting of the standard of living are as valuable to him as the money saved.

I will not go into various methods of publicity more than to say that the newspaper is the best medium. Housing is front-page news now, and the manager must develop and maintain frank and friendly relations with the newspaper brotherhood. Overnight you will see the results of accurate news stories. There is no more fertile field for human-interest features than a housing project before or after occupancy.

DETERMINING POLICIES, PROCEDURES, PERSONNEL

The owner of any enterprise will determine its general policies. Procedures and minor policies he will leave to his administrative agent. In the case of the Federal projects, Congress has determined these broad, general policies. But long before tenant selection begins, the manager must anticipate his problems, decide upon the policies not fixed by Congress, and should work out as many of the procedures as he can possibly anticipate.

How he will select tenants, how much it will cost, and how long it will take will depend to a great measure on the quality and number of his personnel. With his policies fairly well defined, his procedures established, the manager should write down the exact duties of each employee. An analysis of these duties will indicate the qualifications, experience, and training which the tenant selection and rental personnel should possess.

If this personnel is secured from Civil Service lists of eligibles, the duties and qualifications will have been established, and it can be expected that qualified persons will be available. However, I find many people who did not meet predetermined qualifications, but who perform their jobs more effectively than some who do. I have just returned from Nashville, Tennessee, where for the first time Civil Service employees were secured for tenant selection. However, this experience was not a fair test of the Civil Service because the transfer of the Public Works Administration to United States Housing Authority put a great burden on the Commission. Nevertheless, the results have been highly satisfactory.

There had been no examinations with resultant lists of eligibles for "under rental clerk," "assistant tenant selection aide," or "tenant selection supervisor," and it was necessary for the Commission to certify to us eligibles from registers secured through examinations given several years before for "junior case worker," "typist," "junior stenographers," etc.

When I asked for rental guides with experience in dealing directly with the public, I was certified people from the typist register. The salary was very low, but I am happy to say that we were able to select, from a list of thirty-four, three people of various ages and experience who are performing the job of rental guides adequately.

More and more I believe that housing management is a personality job. Experience and training help, but without a genuine love of people, common sense, good judgment, and some knowledge of family life, plus a pleasing personality, *no amount of experience* or training will fit one for any position where he must deal with the lives of people.

GETTING READY TO RECEIVE TENANTS

I am sure you are familiar with the multitude of details involved in the opening of any office—contracts, purchase orders, bills of lading, myriads of forms to be filled out for the Government, janitors to be hired, telephones to be connected, furniture to be borrowed—and from all this chaos order must emerge. A disorganized, poorly planned, and half-ready office

is not the ideal way to receive your first applicant for a home in a public housing project. Believe me that first impressions are lasting and remain long in the minds of prospective tenants. Do not open an office until your staff is trained, your equipment ready to handle your business, and adequate publicity has preceded the opening. It is better to wait than to open too soon.

Tenant Eligibility in Federal Projects

The rules of eligibility are set down in the United States Housing Act of 1937. Briefly they are: (1) Dwellings in public housing projects are available to families in the lowest income group who are in need of housing, who cannot afford to pay for it, but who can afford to pay the rent which must be charged under the financial setup; (2) the net income of a family must not exceed five times the annual rent (meaning rent and utilities), unless a family contains three or four minor dependents, when the net income must not exceed six times the annual rent. Other requirements have been established by the United States Housing Authority to "maintain the low-rent character of the development," a general stipulation of the Act.

Nathan Straus, Administrator of the United States Housing Authority, fixed the following standards of eligibility: Not less nor more than two persons may occupy the two-room dwellings (one room, kitchen and bath); not less than two persons nor more than three persons may live in a three-room unit; not less than three nor more than five persons may move into a four-room dwelling (a four-room dwelling has two bedrooms, living room, and kitchen); in the five-room house not less than four nor more than seven persons (a five-room unit contains three bedrooms). I repeat that I am referring now to the Federal projects which are in operation, not about the new program under local authorities.

What is a family? We say that a family may be a natural family—consisting of parents and children—or a cohesive family. Your aunt, or uncle, or cousin, or your sister's child, or some other relative may be living in the home as a part of the family. This is a cohesive family—boarders and lodgers are not a part of it. We say that two unrelated adults are not a family; sociologically these people may be a family, but we do not consider it so for the purposes of renting. Only one complete family is permitted in each house. Most important of all, it is required that the family shall have demonstrated its ability and willingness to meet obligations, must be desirous of improving its living conditions, and give evidence that it will benefit from better housing. How many times we have heard, "What kind of people are going to live in these homes, and what are they going to be like after a few months?"

In order that you may envision the method of tenant selection and renting, will you, on the one hand, imagine yourself a manager of a project, and on the other, will you imagine yourself an applicant at a public housing project? Suppose you are the manager of a housing project in Nashville, Tennessee, a city of approximately 150,000 population. There on twenty-two acres of land, you will find 314 one- and two-story group houses. This completed but unoccupied project was turned over to the United States Housing Authority on November 1, 1937. You, as manager, were appointed on November 1, 1937, and had previously worked on the construction of the project as supervising engineer. You are in your early forties, married, and have four children. You have had many years of business experience. You are thoroughly familiar with every detail of the construction and you have a good knowledge of government procedure, but tenant selection is entirely new to you. Before you were appointed, all the policies and procedures were laid down, but you will be allowed some degree of flexibility.

Some of your personnel is already on the job when you get there. A representative of the management office in Washington is there to assist you, and he has been on several projects aiding in tenant selection. You are thoroughly familiar with your community, for you have lived in Nashville all your life. The representative from Washington is familiar with certain best ways of doing things and certain problems to avoid.

PROSPECTIVE TENANTS

Let us assume that you have trained your staff, set up your office, organized your procedures, and announced to the public your readiness to do business. In your files are the names of more than two hundred applicants who have registered their desire to be notified when you were ready to take their formal application. You have sent letters to all those who met the requirement of family composition and whose income was within the minimum and maximum limits.

Now, would you mind taking the part of Mr. and Mrs. X, who come to the office to make application for a home? When you come into the office there will be a receptionist at a desk who will greet you pleasantly and say, "Good morning, may I help you?" Mr. and Mrs. X say, "Yes. I got a letter telling me to fill out an application." She will say, "What is your name?" An index card will show you that Mr. X made his application on March 11, 1937, at which time he said that his family consisted of three persons, that he was a truck driver, earned $1,222 a year, and that he would like to be notified when applications were being taken.

Having said that he had left his name in the office before, the reception clerk will then say, "Please come into the office here," and Mr. X is shown into a small private office, where the application clerk makes him feel welcome. He is a self-supporting man and is treated with the same respect and courtesy as any customer would be in a commercial office.

The application clerk asks him his name, race, age, nationality, who proposes to live in this new dwelling, and how large the family is. He says that he is living with his wife's family at present and is most anxious to move in right away; that he has been living at his present address for two months, pays $8.00 a week for board and room, and that he previously had lived at another address for three weeks and paid the same rent. Mr. X then gives us the names of his present and previous landlords, where he is working as a truck driver, and states that his salary is now $25 per week. He says that Mrs. X works in a factory where she makes $500 a year. We ask him for credit references, which he gladly gives. He is then requested to sign a statement at the bottom of the application, which says that he understands that this is not charity and that it does not bind him or us, and that he will be notified if and when we accept his application. He also signs a statement that he has no objection to the management's inquiring about his qualifications and that to the best of his knowledge he has not enough money to pay the rents that private landlords must charge for decent housing.

We ask our application clerk to make everything perfectly clear to the applicant. The application clerk figures that Mr. X is going to be eligible for the project according to the size of family—there are three in his family, and he is eligible for a three- or four-room house, not a two-room, for you can't have more than two people in a two-room house. This gives him a choice between the three- or four-room house.

We shall then consider the cost of the other things he needs besides rent. The clerk figures the least he can "get by" on, according to a minimum standard of living, not a "relief" standard, but a decent minimum standard. We figure out this statement of living expenditures for every family, and this standard has been prepared in every city by the local advisory

committees with the aid of home economists, case workers, and people who know living costs in the town. The basic principles have been worked out in Washington; it is fixed on an individual basis for each city and then on an individual analysis for each family.

Mr. X is informed that he will have to have at least $685 for everything but the rent and utilities (that is, for Nashville, Tennessee) and in addition $261 for the rent and utilities which is the price of the rent and utilities for the cheapest, smallest house he can occupy—a three-room house. So he will need $946 minimum income.

Let's look at the other side of the ledger. What is the maximum he can have? Congress has fixed that, and we have no latitude. Congress says that the income must *not exceed* five times the rent, that it must be less than that figure. Five times the rent on the most expensive four-room house in Cheatham Place will be $1,740. His income then must be between $946 and $1,740. But his income is $1,800, and so he is told that he is not eligible. If we have done a good job, he will understand why.

We have considered applications in the order in which they are received, but that does not mean prospective tenants apply in that order, for some may apply later who are in greater need of housing than earlier applicants. Some names may be put on the waiting list until we see what applications come in during the renting period.

Investigation of Prospective Tenant

However, when Mr. X returns and says that his wife is no longer working, we gladly reconsider his application. We see that his number is 131 and that he applied nearly a year ago. A visitor is sent to his home, and it is found that there are three families living together, eleven persons in three bedrooms, it being a five-room house, all sharing one bathroom and one kitchen. The outside of the house is in fairly good condition. If you were to pass by, you would not see that the home was substandard. But inside it is very dark. It is close to the next house. It is heated by a parlor radiator, the only heat for the entire house, and totally inadequate for the number of people living there.

What does the house look like? It is neat, clean, and attractively furnished, and the woman has made shades out of old oil cloth and has tried to make the home more attractive. The visitor finds out that the woman was working when she came to live with her mother and that the mother has been caring for the seven-year-old child, but, that now the brother is married and living with them, they must move.

The little girl is interested in the conversation, especially that part having to do with her school. She is bright, clean, and well mannered. The woman says that she has some savings to pay her first month's rent, as she realizes that that has to be paid in advance. We ask about debts and find that they owe $50. This problem concerns us, for it has been found that many families have obligations that they will never be able to meet. The rent and utilities which they now pay for the one room they occupy is $210 a year.

Applicant Is Accepted

We study the record; the supervisor looks it over; the housing manager says it is all right to accept this family. The file is replaced, and a clerical worker prepares a letter which states that Mr. X has been accepted and asks him to come in and sign a lease.

Many of these people do not know what a lease is, never having signed one, and often they think that they have to move in that day and that the lease is for a year. Not knowing what is going to happen from month to month, they hesitate to sign. We have lost many people because they did not understand. But if they come back, they are again greeted by the receptionist, who has a list of those who are

eligible and who have been notified to sign leases. They are taken into a rental office and told that they may have any three- or four-room house that is not already rented.

After having looked over the map, the applicant indicates his choice, a guide takes him to see the house, and he is ready to sign the lease. He is taken back to the office, where as much time as possible is spent to make him consider the matter carefully, to realize that this is to be his home, and that he must take care of it as if it were actually his own. He is reminded that few families are privileged to live in a brand-new home and it is hoped that he will be happy. We tell him that the management will do everything it can to make him satisfied, but that there are two things he must do: (1) The rent must be paid when it is due and it must be paid promptly; (2) He will have to conduct his life in such a way as not to disturb his neighbors. We tell him some one will visit his home to see that everything is in proper order, but that he will not be inspected like an inmate of an institution. Many questions are asked, and we spend as much as one half hour with the family, and believe it is time well invested. He pays his deposit to a cashier, and the transaction is closed.

APPLICANT IS REJECTED

Now suppose Mrs. A, a widow, with a thirteen-year-old child, comes in and tells the application clerk that she has a pension of $25 a month and that she gets occasional work cleaning and sewing. When she is questioned, she says that her income is never over $530 a year. The application clerk will ask the cost of her present rent and utilities, and whether she doesn't think $17.75 a month is more than she can pay. If her income is about $530 a year, she is probably paying less than the project rent, and she may have no idea where she is going to get the difference. (It develops sometimes that an applicant may be paying $10 a month for rent plus utility costs, or an annual rent of $168, as against $213, the rent in the project. She thinks that the Government will let her live rent free if she runs short.)

Based on our estimate of family expenditures, we have found that this widow would need $510 a year for food, clothing, household operation, personal care, transportation, a minimum of medical care, some recreational and educational enjoyments, some community welfare gifts, and so forth. Her rent and utility will have to be at least $213 a year for a one-room home, with bath and kitchen, and her income should be the sum of $510, her living allowance, plus her rent and utility charge, $213, or a total income of $723. If her income had been within $50 of this minimum, her application would have been held for further study, and perhaps put on the waiting list; $200 short of that minimum does not warrant further consideration. She, too, should go away with an understanding of the reasons why she was refused a home in Cheatham Place. . . .

SUMMARY: GENERAL CONSIDERATIONS

To summarize, the job of management prior to opening a public housing project requires study, analysis, and planning. The work of the owner, the architect, the builder, and the manager must be coordinated in the interest of the *people who will live* in the new homes.

The manager of a public housing project should always remember that he is first and last a public servant. The salary of every one employed to manage and operate a public housing project will come from the rents paid by the tenant. The manager will expect to collect the rents promptly on rent days, and, in return, the tenants will expect service for the rent paid.

Therefore, management employees will do well to give first consideration to the desires and needs of the tenants. This does not mean being subservient to them.

The second consideration that should be uppermost in the mind of management prior to and after the opening is that the public owns the project. The public expects that the new homes will be so administered that all families will live better and happier lives and, therefore, be more useful citizens.

The Professional Pledge of the C. P. M.

I HEREBY pledge myself to act in strict accordance with the principles, declarations, and regulations of The Institute of Real Estate Management.

I pledge myself in particular to place honesty and thorough work above all else in my administration of real property; to advance myself constantly in knowledge and ability through the study of literature on real estate management, the instruction of eminent teachers, the interchange of experiences with fellow Certified Property Managers, and attendance at meetings of the Institute whenever possible; to be faithful to the personal interests of my professional brothers and to seek their counsel when in doubt of my own judgment; to render willing help to my fellow Certified Property Managers; and to give my services freely to the Institute as required or desired.

Moreover, I pledge myself to shun unwarranted personal publicity and dishonest money seeking as disgraceful to our profession; to render complete, thorough, and honest service to landlord and tenant alike regardless of monetary consideration; to strive assiduously to build goodwill for the properties under my charge and to use my best talents at all times to preserve and maintain the value of such properties; to secure the greatest possible net return to the owners of properties entrusted to my management; and to give devoted attention to the safety and comfort of tenants of these properties.

Finally, I pledge myself to cooperate in advancing and extending, by every lawful means within my power, the influence of The Institute of Real Estate Management.

Leases

By ANDREW C. HAMILTON

THE contract by which the relationship of landlord and tenant is created is known as a lease. It is a contract for the possession and profits of lands and tenements, either for life, for a specified period of time, or during the pleasure of the parties. No special words are necessary to create a lease, and whatever is sufficient to explain the intent of the parties that one shall divest himself of the possession and the other obtain the possession for a determinate time amounts to a lease.

There, of course, must be offer and acceptance as in any other type of contract. Where the offer of the landlord is neither accepted nor rejected, but the prospective tenant proceeds to occupy and use the premises, such action by the tenant has been construed as an acceptance of the terms of the lease previously offered.

A lease or an agreement for a lease must be supported by a lawfully sufficient consideration in order to be a valid contract. Naturally, the demise (grant) of the leasehold estate is held to be a sufficient consideration for the lessee's undertaking to pay rent; and the payment of rent is held to be a sufficient consideration for the demise.

Considerable difficulty often arises as to the interpretation and effect of a formal agreement for a lease to be executed and delivered at a future date. Does such an agreement itself immediately operate as a lease? It does only if that is the intention of the parties as indicated by all the circumstances surrounding the transaction. In general, an agreement for a lease vests no estate in the proposed tenant. Of course, the proposed tenant may sue for damages in case of breach of such an agreement by the landlord.

FORM AND CONTENT

A verbal lease is binding and enforceable in the absence of contrary provisions of the statutes of the state in which the property is located. However, the statute of frauds, as enacted in almost every state, does require that in order to be enforceable all leases for a term of more than one year must be in writing or be evidenced by a memorandum in writing in accordance with the statute.

In general, any agreement under which one person obtains the right of enjoyment to property of another, with his consent and in subordination to his rights, may create the relation of landlord and tenant. It is essential to the validity of a lease that it define with reasonable certainty the date of commencement and the duration of the term of the lease. The lease must also contain a sufficiently accurate description of the demised property to indicate clearly just what property is intended to be covered by the lease. It has been held that a technical misdescription will not invalidate a lease where the lease is sufficiently definite to identify the property intended. It is important that the parties to the lease be named accurately in the body of the lease. There are court decisions to the effect that a person whose name is not mentioned in the body of the lease is not a party thereto nor is he bound thereby even though he signs and acknowledges it as his. (The laws in Illinois and Washington seem to be contra to this general rule.) The parties to a lease may properly adopt, as a part thereof, by reference, the terms of a prior lease between them, or between one of them and a third person if its terms are known to both.

EXECUTION, DELIVERY, AND ACCEPTANCE

The formalities required by statute in

any state with regard to the execution of leases must, of course, be followed. Unless the contract is signed by both parties, it may not be enforceable as a valid lease because of lack of mutuality. In many states it is held that a lease may be executed by the exchange of duplicate leases, each of which is signed only by the other party. A lessee by accepting a lease and entering into the use and occupation of the premises will thereby in many jurisdictions become liable for the performance of the covenants and conditions of the lease although it is not signed by him. This is also true in some states under the same circumstances where the lease is executed by the lessee but not by the lessor. The safe procedure is always to have both parties execute the lease.

The general rule is that it is not essential to the validity of a lease that it be under seal.

In almost every jurisdiction it is provided by statute that every lease for a term in excess of a period specified by the statute is invalid as to third parties unless the lease is acknowledged by the parties thereto. But in such states a lease is usually held valid and binding as between the parties thereto and as to third persons having actual knowledge of its existence even though not witnessed nor acknowledged in accordance with the statute. In Maryland and Ohio it is held that a lease which is not properly attested and acknowledged, as prescribed by the statute, is invalid, even as between the parties thereto and third persons with actual knowledge of its execution.

A lease takes effect so as to vest the leasehold estate only from the date of delivery of the lease and not from its date or the time it was signed. There can be no delivery without an acceptance, either express or implied. Delivery usually implies a manual transfer of possession. However, where the lessee by formal assent or unequivocal acts, such as entering into possession of the premises, treats the lease as in his possession, it is sufficient to constitute delivery.

Recording of Leases

In most jurisdictions it is required by statute that every lease for a period in excess of that designated by the statute must be recorded in the county where the land is situated, and a failure to record the lease in accordance with the statute will render the lease void as to subsequent encumbrancers and purchasers without notice who first duly record their conveyances.

Validity of Lease

A lease effected by means of the imposition of undue influence or duress is voidable at the election of the party subject to such influence or duress. Likewise fraud or deceit in the making of a lease will render it voidable.

The general rule is that a lease made with the knowledge and intention of the lessor that the demised premises are to be used for illegal or immoral purposes is unenforceable and invalid. When, however, the lessor in good faith leases his premises without any knowledge that they are to be used for illegal or immoral purposes, the fact that they are subsequently so used, without collusion or assent on his part, will not invalidate the lease or impair his right to enforce any of the covenants of the lease.

Where there are included in a lease certain restraints and limitations not allowed by law, only these restraints and limitations are void; the rest of the lease is enforceable.

Ratification

Occupation of the premises by the lessee and payment of rent according to the terms of the lease is usually held to be a ratification by the lessee of an invalid lease. Likewise acquiescence in the occupancy of the premises by the lessee and acceptance of rent from him are usually

held to be ratification of the lease by the lessor.

MODIFICATION AND RESCISSION OR CANCELLATION

Although a contract under seal cannot be modified by parol agreement so as to introduce any new elements into the contract, nevertheless conditions in a lease under seal can be waived by parol where the waiver is in the nature of a release or discharge. Also an oral agreement, *if not such as to come within the scope of the statute of frauds* and based upon a sufficient consideration, is valid to modify the terms of an existing written lease. Where the acts of the parties amount to an abandonment of the original contract and a waiver of its terms, either party thereto may enforce his rights under the agreement as modified. The surrender or abandonment of a written lease and the substitution of a modified agreement may be parol and need not be proven by express and direct evidence, but may be inferred from the acts of the parties.

In order for a subsequent modification of a lease to be valid, it must be supported by a sufficient consideration. For example, where, after a breach of the terms of the lease, the lessor elects to waive the conditions of the lease and the lessee consents to continue to occupy the premises under promise of a reduction of rent, there is sufficient consideration for the promise.

A lease, even though it is under seal, may be rescinded, cancelled, and surrendered by an executed parol agreement.

CONSTRUCTION AND OPERATION

A written lease must be construed according to the intention of the parties, and such intention is to be gathered from the whole instrument rather than from any single clause. Where the language of a lease is not perfectly clear, the circumstances of its execution and the acts of the parties subsequent thereto may be indicative of the intention of the parties.

Effect should be given to both the written and printed provisions of the lease if consistent with each other. Where there is a conflict between the written and printed clauses of a lease, the written clause will prevail. The provisions of a lease are always most strongly construed against the lessor. Where there are ambiguities in the terms of the lease itself, it is proper and often necessary to construe the lease in connection with, and in the light of, the previous agreement which was its foundation in order to ascertain the actual intent of the parties.

Of course, leases, just as other contracts, may, and probably always do, contain both covenants and conditions. For a breach of a covenant, the ordinary remedy is merely a judgment or setoff against the rent for the amount of the damages, but, for a breach of a condition, the injured party may elect to forfeit the lease.

ESTATES FOR YEARS

An estate for years is a leasehold estate which is limited to exist for a certain time or for some determinable time. It is not, as the term "estate for years" might imply, one which is necessarily created for a term of more than one year. If the leasehold estate is created for a definite period, such as a year or six months, or any other longer or shorter period, it is still technically known as an "estate for years." The ordinary lease of an apartment for one year comes within this classification; so does the lease of property for ninety-nine years or any other definite period of time.

TENANCY FROM YEAR TO YEAR

A tenancy from year to year exists when a tenant takes possession of land under a lease which specifies the amount of rent per year but not the length of time for which the lease is to continue, or where there has been a lease for a specific term and, after the expiration of that

term, the tenant is permitted to become what is commonly called a "holdover" tenant. The latter situation exists where, without objection from the landlord, the tenant continues in possession of the premises after the expiration of his lease and without claiming adversely to the landlord. If the tenant holds over and continues in possession of the premises after the expiration of his term, he becomes either a trespasser or a tenant at the option of the landlord.

In order to create a tenancy from year to year, the landlord must in some manner recognize the continued tenancy of his tenant and exercise his option to regard him as a tenant from year to year. A tenancy from year to year cannot be inferred from the mere fact of the tenant's holding over. However, if, after the lease has expired, the landlord should agree to accept rent from the tenant, or otherwise recognize the party holding over as a tenant, a tenancy from year to year will be created. The mere fact that the landlord takes no steps after the lease has expired by its own terms to regain possession of his property is not an act from which an inference of a new tenancy can be drawn.

Where a tenant holds over after the expiration of his term and the landlord recognizes the continued tenancy in some manner, then the law will imply an agreement between the landlord and tenant for a further term of one year upon the same terms and subject to the same rent as in the prior lease. This legal presumption may be rebutted by proof. The question as to the terms and whether a tenant is actually a tenant from year to year involves questions of fact which must be decided in court in the event of a dispute between the parties.

Tenancies from year to year are the creation of judicial decisions based upon principles of policy and justice and are indeterminate as to duration. The tenancy will continue from year to year after it has been created until it is terminated by the giving of the sixty-day notice provided by the statutes in many jurisdictions.

Tenancy At Will

The reservation of an annual rent is the chief circumstance which distinguishes leases for an uncertain term from tenancies from year to year. Where a tenant has been placed in the possession of a property without any term having been prescribed or rent reserved and as a mere occupier of the property, he is a tenant at will.

Tenancy At Sufferance

A tenancy at sufferance arises where one comes into the possession of property by right and then holds over without right. It arises whenever anyone continues in the possession of property without agreement after the termination of the lawful possession by which he entered into the property.

Thus, where a person entered the employ of another for an indefinite period with the agreement that he might occupy certain rooms during the course of his employment, he was held to be a tenant at sufferance. Upon his quitting the service of his employer, the latter could at any time terminate the tenancy.

Rent

The term "rent" includes the compensation to be paid for the occupation of land by a tenant, whether he holds under a lease, merely at will, or at sufferance. A covenant for the payment of rent is regarded as a covenant which is annexed to and runs with the land and thus follows the land upon which it is chargeable into the hands of an assignee.

Where one enters upon land with the owner's consent and uses and occupies the premises for his own benefit or profit, there arises an implied promise to pay a reasonable compensation for such use.

In the absence of statutory or contractual provision to the contrary, a tenant by "holding over" becomes liable for rent

upon the same basis as the original lease. Nothing but a surrender, a release, or an eviction can in whole or in part absolve a tenant from the obligation of his covenant to pay rent.

In the absence of an express warranty or covenant to repair, there is no implied covenant that the premises are fit for occupation and use for the particular purpose which the tenant intends to make of them. It is customary, however, to insert a clause in the lease releasing the tenant from liability if the premises become untenantable. Failure of the landlord to comply with the provisions of the lease in relation to heating the premises is a defense to an action for rent.

A tenant under a lease containing no covenant to repair cannot successfully defend an action for rent by showing that the premises are out of repair.

Under the common law, a lessee of premises which are accidentally destroyed subsequent to the making of the lease cannot escape the obligation of the covenant to pay rent unless he has stipulated in the lease for a cessation of the rent in such a situation.

When a tenant is deprived of the use and enjoyment of the property by the acts of the landlord, the obligation to pay rent ceases.

The surrender of the leased premises by the tenant extinguishes the relation of landlord and tenant and releases the tenant from liability for rent accruing thereafter. It may be, of course, and usually is, expressly provided in the lease that the obligation to pay rent shall not cease upon the surrender of the premises before the expiration of the term. Moreover, a tenant who abandons the occupancy of the demised premises before the expiration of his lease without the consent of his landlord does not thereby exonerate himself from the payment of the rent for the residue of the term.

While the rate of rent reserved in a lease may be changed by a proper agreement on a sufficient consideration, it seems well settled that the terms of a lease under seal cannot be modified by parol so as to change the amount of rent to be paid for the unexpired term.

The tenant who remains in possession after the expiration of his lease with the express or implied consent of the lessor is liable for the same rate of rent as that reserved in the lease.

Under a lease providing for the appointment of arbitrators to appraise the rental value of a demised property from time to time, a tenant, before he can be sued for the reasonable rent, is entitled to such a reference to arbitrators.

Rent does not accrue as a debt until the tenant has enjoyed the use of the land for the period for which it is payable. Consequently, in the absence of some agreement or understanding between the parties, rent is not due until the expiration of the term.

Rent, of course, belongs to the owner of the soil, or the person entitled to the possession of the leased premises. Remember that the assignment of a lease does not annul the lessee's obligation on his covenant to pay rent, even though the lessor has assented to such assignment and collected rent from the assignee, unless the lessor has accepted the surrender of the lease and released the original lessee. The fact that a lessee sublets the premises does not affect his liability to the lessor for the rent unless the subtenant is accepted by the landlord as his immediate tenant, in which case the original lessee is discharged from liability for rent accruing subsequent to such acceptance.

No matter from whom the rent is received, its payment will extinguish the demand for it and satisfy the liability to the landlord. Payment of rent, although usually made in money, may be made in any manner upon which the parties may mutually agree. Where no place is appointed for payment, rent is payable on the land. Payments made by a

tenant to his landlord on account of rent will, in the absence of any direction by the tenant or agreement of the parties, be applied in payment of the rents first accrued. Rent paid under duress or coercion may be recovered by the tenant.

Thoughtful consideration and analysis of this very brief statement of a number of general principles of law concerning leases will demonstrate that the printed portions of a carefully prepared form of lease are not merely a surplus of confusing words but that each clause has its own good and sufficient reason for being.

One Hundred Per Cent Locations

MR. MARK LEVY'S article on "One Hundred Per Cent Locations" in the February 1938 issue of the JOURNAL has been received with enthusiasm in all parts of the country. It is Mr. Levy's desire to improve his list of 100 per cent locations of the various principal cities, and he has announced the following corrections and additions since the publication of the article:

CAMBRIDGE, MASSACHUSETTS: Massachusetts Avenue at Central Square and to Norfolk Avenue.

HARTFORD, CONNECTICUT: Both sides of Main Street, from Asylum Street and State Street on the south to Church Street and Talcott Street on the north.

LITTLE ROCK, ARKANSAS: Main Street, between Third Street and Sixth Street.

MADISON, WISCONSIN: East Main Street and South Pinckney Street to East Washington Avenue, with Mifflin Street, both East and West, running second.

PADUCAH, KENTUCKY: Broadway, between Second Street and Third Street.

PITTSBURGH, PENNSYLVANIA: Fifth Avenue, from Market Street to Smithfield Street; rapidly going to Seventh Avenue; also Liberty Avenue.

SOUTH BEND, INDIANA: Michigan Street, between Wayne Street and Colfax Avenue.

What to Study

C. M. JONES, EDITOR

Librarian, The Institute of Real Estate Management

Book Review

Nelson, Herbert Undeen and Nelson, Marion Lawrence. NEW HOMES IN OLD COUNTRIES. *Chicago, National Association of Real Estate Boards, 1937. 123 pp. $1.25.*

NEW HOMES IN OLD COUNTRIES, by Herbert Undeen Nelson, Executive Vice President of the National Association of Real Estate Boards, and his wife, Marion Lawrence Nelson, is an excellent report on home building in Europe.

Except for France, which has no building program, the other countries are all engaged in large quantity house production. It would hardly seem fair to compare the cost of the average house in any European country with the cost of the average home we think the average American should occupy. All of their houses seem to lack something. Either sanitary conditions are below par; material is inferior; convenience is lacking; central heating is largely unknown; light, air, and ventilation are often minor points or lightly considered; and the design in general is poor. On the other hand, vast benefit and great improvement have been brought to a people whose individuals are now housed far superior to the conditions under which they previously lived.

The amount of money spent and the quantity of homes produced are matters of amazement. We Americans are too apt to think that we are the only land in which real estate expansion is taking place. This book brings healthy realization that this is not the case. It is interesting to note that in most of the countries private building and very largely any private real estate activity have almost disappeared. We learn that many of the countries tried direct subsidies and direct building and found they did not work. Political expediency inevitably led to the downfall of fair and economic management of the property. Where the government helped by guaranteeing loans and making possible long-term credits, success in the housing movement was assured. It is to be hoped, however, that the cooperative movement, the extinguishment of private enterprise apparent in so many of these countries, will never be the fate of ours.

The authors place their finger on the sorest spot of American home ownership—ever-excessive taxation and ever-increasing taxation. Countries in which property taxes are based upon income seem to have arrived at the fair solution of the problem. Longer-term financing on easier money rates has been assured to this country by the participation of the government through the agency of the Federal Housing Administration. It would seem that if taxes could be ameliorated, American ingenuity, American genius, and American capital would build for this country, not only sufficient houses, but better houses.

For all who are struggling to achieve the goal of better homes so that we may have better Americans, Mr. and Mrs. Nelson's book, *New Homes in Old Countries*, is an inspiration in showing that it can be done.

RALPH E. SPRAGUE.

Bridgeport, Connecticut.

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North, Nelson L. REAL ESTATE SELLING AND LEASING. *New York, Prentice-Hall, Inc., 1938. 608 pp. $5.35.*

AMONG the recent contributions to the growing series of books devoted to the field of real estate, the work of Nelson L. North entitled *Real Estate Selling and Leasing* is one of the most comprehensive. Embracing practically every phase of activity pertaining to the different classes of real property, the book demonstrates the author's thorough knowledge of this complex subject. In view of the wide scope of the work, the limited space devoted to each classification precludes an exhaustive study of each branch. However, the basic principles are well covered and clearly presented.

The book opens with a presentation of the principles of conduct as reflected in the Code of Ethics of the National Association of Real Estate Boards, an outline of the operation of a well-organized real estate office and of approved methods of listing properties and contacting buyers, and an excellent chapter on salesmanship.

There follows a brief analysis of the various types of real estate, including construction of single- and multiple-unit residential properties, modernization of obsolete houses, and the management of income properties. The principal factors involved in the improvement and sale of subdivisions are also discussed and accompanied with sample sales contracts and restrictions. A series of proven form letters for contacting new clients, some sound advice on advertising, and a digest of commission schedules used in cities of over one hundred thousand population are valuable data for the broker.

Other chapters of special interest are devoted to business property leases, including percentage

and ninety-nine-year tenancies, with particular attention to chain store leasing and the assembling of the elaborate factual data which these concerns require in selecting new locations. Farm lands and industrial properties are covered at some length, while chapters devoted to airports, parking areas, and auction sales give the book an "up-to-the-minute" atmosphere.

Recognizing that the real estate business has now developed into a profession, the work has been designed to serve as a text book for a college course, for which purpose it is admirably adapted. At the same time it should prove helpful to every wide-awake broker who is interested in the continually changing panorama of real estate progress. It is a valuable addition to the library of all who are interested in any aspect of real estate, whether from a sales, management, or ownership viewpoint.

B. O. MILLER.

Los Angeles, California.

New Articles

"A New Profession—Public Housing Management" by Robert R. Taylor.

Public housing is becoming more important in our new housing program, and its success will depend largely upon the skill of its management. Management of a *public* housing project is different—it seeks to achieve desirable social objectives; therefore, today it is recognized as a new profession that demands specialized training and study. Mr. Taylor, who himself is experienced as the manager of the Michigan Boulevard Garden Apartments Building Corporation in Chicago, examines for you the broad objectives of public housing and shows that there is a great need in this field for humanity today. Mr. Taylor has studied public housing in European countries where these projects have already proven successful. He believes that now is the time to establish high standards for housing managers in order to build an adequate and assured foundation for this new profession. *Real Estate. April 16, 1938, p. 10. $0.30.*

* * *

"Specifications Play a Part in Management" by Oliver S. Turner.

We associate "specifications" with contractors, but this writer insists that there is a definite and urgent need for them in management operations involved in purchasing and maintenance. "Webster says: 'Specifications: A definite and complete statement as a contract.' . . . Putting this in very plain language one might say that specifications simply mean 'outlining what one wants.' A specification relating to the performance of maintenance work undertakes to set forth in definite form the amount and kind of work contracted for, the character of workmanship, and the materials to be used, and finally the results expected." A practical example is given for roofs. Also included is a list of the specifications in daily use. The conscientious manager will admit and realize the need for the development of such specifications covering maintenance for both offices and apartment buildings. *Real Estate. April 23, 1938, p. 7. $0.30.*

"Application of Means to Reduce Building Operating Costs" by Edward F. Gallaher.

If the financial return on your office and apartment buildings is low, it is possible that the experience and advice of an efficient building manager as to means of reducing operating costs will add to the net income. The author has found that heating costs vary as much as from two cents a square foot to ten cents. It might be due to the use of needlessly expensive fuel or faulty equipment. Fourteen steps are listed in reducing building operating costs, and suggestions are given as to the value of an efficient engineer, how to coal a fire, how to reduce insurance costs, etc. Here are practical hints from a man "who owns one." *Real Estate Record, Metropolitan Edition. April 2, 1938, p. 9. $0.70.*

* * *

"Traffic Counts" by Joseph Laronge, M.A.I.

Real estate brokers are beginning to realize the great importance and significance of the traffic count in leasing and appraising. Chain store operators invariably rely on an analysis of a traffic count in locating a new store in a city. This article applies principally to the downtown or central shopping area. There are many conditions and factors which influence the interpretation of traffic counts; the outstanding element is the total number of people passing, but a study must be made of the difference between the quantity and quality of the pedestrians. Calculations of the number of men and women passing, the sunny or shady side of the street, and shopping habits are a few of the factors to take into consideration. There are also certain conditions under which the counts will prove to be more valuable, such as the hour of the day, time of the year, weather, etc. Cleveland is taken as an example, and actual counts are included to illustrate various points. Every broker should have this comprehensive study for handy reference; as the author states: " . . . regardless of the pitfalls and dangers, *traffic counts* serve invaluable purposes." *The Journal of the American Institute of Real Estate Appraisers. April, 1938, p. 146. $1.25.*

"Looking at All Sides" by George R. Stearns.

Your tenants might know all about income taxes, personal property taxes, and sales taxes, but what do they know about real estate taxes? They no doubt believe they are something about which the landlord should worry and do not realize that they pay them in the form of higher rentals. How would they react if they were informed that three and one third months' rent each year goes for taxes if they live in a single-family dwelling and that seven weeks' rent is taken if they live in an apartment? They might join with the landlord in demanding that the realty tax be reduced. These facts should be revealed to them, and it is suggested here that a memorandum be enclosed with the monthly statements showing how much they are paying in taxes. A peach of an idea, we say. *The Economist. April 30, 1938, p. 4. $0.35.*

* * *

"Keep Your Management Business by Keeping Owners' Good Will" by V. J. Booth.

The author finds that most avoidable losses of the management business come under three headings: (1) failure to secure tenants promptly or on the owner's conditions; (2) failure to collect rent promptly; (3) maintenance expenses. The owner must be kept informed with these numerous details in order to keep his good will. Included are some suggestive letters explaining to the property owner what the manager is trying to do for him, making him realize that the manager is not neglecting his business. These letters are not form letters, but should be personalized according to the individual case. *National Real Estate Journal. May, 1938, p. 30. $0.70.*

* * *

"Technique for Compiling Apartment House Operating Data" by Stanlee T. Bates.

A well-known firm, Carlton Schultz Management, Inc., has been carefully compiling the operating costs of a number of apartment buildings for several years. These costs have been broken down into various classifications and reduced to dollars per room per year and to cents per square foot of rentable area per year. These tables are interesting to study, and one is presented for a building for which records have been kept for six years. The example given is an apartment house, eight years old, and containing twenty five-room apartments, the average rent of which was $18 per room per month in 1937. Among the costs broken down are: coal (heat and hot water), electricity, painting and decorating, repairs and replacements, management, insurance, etc. *Real Estate Record, National Edition. May 7, 1938, p. 16. $0.45.*

Once Again—"The Percentage Lease"

BEFORE entering into a percentage lease arrangement it is advisable that the lessor be fully cognizant of the multiple phases of the question. The attraction toward percentage leases is a powerful one, with its rich promise of great volume and high percentage. These lures have tremendous appeal and are often difficult to resist. The realization, however, often falls below the anticipated result. It is my belief that, if lessors would assume a bolder and more positive stand in arriving at minimum guaranteed rentals, they would be in a much more favorable position. The prospective lessee will soon realize that a fair minimum guaranteed rental must be paid in order to secure choice locations, and fantastic dreams of large payments based upon percentage of volume will soon disappear. Lessors must and should insist upon a minimum guaranteed rental which is sufficient to cover operating expenses and then, if it is desired, use the percentage feature as a gamble for profit.

It is my opinion that retail store locations are now sufficiently stabilized so that the percentage form should be used only as protection against an inflated currency, in a sense, a safety valve. Lessees tend to continue to demand percentage arrangements as a permanent and approved form of lease. Percentages were conceived as a depression measure and, as conditions improve, should be applied more cautiously. Lessees should not be encouraged to expect the percentage arrangement as a permanent form lest it work to the detriment of the lessor.

Lessees work harder to cover minimum guaranteed rentals; if minimums are low, there is a slackening in the effort put into the location and an acceptance of a volume which covers the guaranteed rental even though it be a low one. This may be especially true of lessees who operate more than one store and who are not wholly dependent upon the earnings of a single unit.

The existence of some pressure in the form of proper and adequate minimum guaranteed rentals should mean increased revenue to lessors. Lessors should not lose faith in their locations. In a particular instance, if the time is not opportune for the concluding of a satisfactory lease, the location should be leased for a short term only.

In brief, it might be said, in entering into any lease involving a percentage arrangement, every effort should be made to place the minimum sufficiently high so that, if the percentage fails to materialize, the lessor derives his full value for the location and, in any event, receives enough to cover carrying charges.

A. R. FRIEDMAN.

Boston, Massachusetts.

Certifications

The title of "Certified Property Manager" has been conferred upon the following individuals by The Institute of Real Estate Management.

(Arranged alphabetically by state, city, and name.)

B. O. MILLER, LOS ANGELES, CALIFORNIA. Born, Elizabeth, New Jersey, February, 1882; President, W. I. Hollingsworth & Co.; President, Los Angeles Realty Board, 1934; Director, Los Angeles Realty Board; Honorary Director, California Real Estate Association; President, W. I. Hollingsworth Insurance Agency; Vice President and Director, Western Homes Federal Savings and Loan Association; President, Forest Lawn Company; President, Pacific Geographic Society and other corporations; entered the employ of W. I. Hollingsworth in 1903 as office boy; with the firm continuously since that time; Executive Vice President of the company since 1915 and elected President, October, 1937, upon the death of Mr. Hollingsworth; experienced in practically every department of the business and for a number of years in charge of the Property Management Department; specializes in business and income properties and chain store leasing; also maintains departments for the sale of industrial, residential, and subdivision properties.

GEORGE R. MORRISON, DENVER, COLORADO. Born, New York City, December, 1896; President, Morrison & Morrison, Inc.; President, Broadway Mortgage Company; Secretary-Treasurer, Arvid Olson Investment & Building Company; high school graduate; several short specialty courses at the Denver University School of Commerce; started in the real estate business in 1916 as a rental collector for the German American Trust Company, a local financial institution which at that time had a real estate department; experience since that time has covered the entire field of real estate activity; between 1,400 and 1,500 units, including residences, store buildings, apartment houses, and office buildings, now managed by firm; institutional clients include Capitol Life Insurance Company, Railway Building and Loan Association, Pueblo, Colorado, American Agency & Investment Company, and Home Owners' Loan Corporation; also Loan Correspondent, Connecticut Mutual Life Insurance Company.

RALPH E. SPRAGUE, BRIDGEPORT, CONNECTICUT. Born, Philadelphia, Pennsylvania, August, 1897; President and Treasurer, The Investors Mortgage Company; President, The Bridgeport Real Estate Board; Chairman, Housing Committee, and member Industrial Committee, Bridgeport Chamber of Commerce; educated in Bridgeport, Connecticut, at the Bridgeport High School and the Bridgeport Department, Northeastern University, Boston; twenty years' experience in the general real estate business with twelve years' experience in managing properties, including both business and residential; institutional clients include The Massachusetts Mutual Life Insurance Company, The Fidelity Mutual Life Insurance Company of Philadelphia, The New York Trust Company, The Guaranty Trust Company of New York, The Bridgeport-City Trust Company, and The Bridgeport-Peoples Savings Bank.

HILARY S. DRISCOLL, BRISTOL, CONNECTICUT. Born, Litchfield, Connecticut, June, 1888; Treasurer, Tracy, Driscoll & Co., Inc.; member, Bristol Real Estate Board; Past President and Past Treasurer, Bristol Real Estate Board; member, National Committee on Real Estate Taxation; member, Board of Finance and Control, City of Bristol; member, Connecticut Association of Real Estate Boards; attended Columbia University, School of Accountancy; in close touch with real estate matters as to sales, construction, ownership, management, etc. since February, 1913, in Bristol, Connecticut; manages mercantile, business, factory, and residential properties; institutional clients include The Bristol Bank & Trust Company, The North Side Bank & Trust Company, Bristol, Connecticut, S. S. Kresge Company, Detroit, Michigan, F. W. Woolworth Company, Albany, New York, The Berkshire Mortgage and Finance Corporation, Torrington, Connecticut, The Farmington Savings Bank, Farmington, Connecticut, The Hartford Electric Supply Company, Hartford, Home Owners' Loan Corporation, and The William J. Tracy Company, Bristol.

WILLIAM MacROSSIE, GREENWICH, CONNECTICUT. Born, Hartford, Connecticut, July, 1889; Vice President and Treasurer, Ladd & Nichols, Inc., New York City; Director and Past President, Real Estate Board of Greenwich; former Director, Connecticut Association of Real Estate Boards; professional territory covers Fairfield County, Connecticut, Westchester County, New York, and New York City; graduate Columbia University, 1911, B.A. degree; M.A. degree from Columbia University, 1912; completed Case-Study Courses I and II presented by the American Institute of Real Estate Appraisers at Columbia University, 1937; Member, American Institute of Real Estate Appraisers; completed lecture course in real estate appraising offered jointly by New York University and the New York Chapter of the American Institute of Real Estate Appraisers, 1937-1938; completed course in building and construction, Extension Department, Columbia University, 1934; fifteen years' experience in real estate management.

JOHN A. CAULKINS, HARTFORD, CONNECTICUT. Born, Hartford, Connecticut, May, 1884; manages property in Hartford, Connecticut, for The Equitable Life Assurance Society of the United States; active member, Hartford Real Estate Board; professional territory covers Hartford County; in building and real estate business for over thirty years; five years' experience in real estate management; properties managed include apartments and single-family homes.

AUBREY MADDOCK, HARTFORD, CONNECTICUT. Born, Willimantic, Connecticut, October, 1890; President and General Manager, Aubrey Maddock, Incorporated; Manager, Maddock & Company, fire and casualty insurance; Counsellor to First National Bank of Hartford in real estate and mortgage matters; Assistant City Editor and Assistant Managing Editor, *The Hartford Courant*, 1913-1917; Director, Press Co-operation, Connecticut State Council of Defense, 1917-1918; Agency Assistant, casualty lines, The Travelers Insurance Company, 1919-1924; Member, American Institute of Real Estate Appraisers; Past President, Connecticut Association of Real Estate Boards; former Chairman, States Council Division of the National Association of Real Estate Boards; actively engaged in the real estate business since 1924; manages about 150 properties, 700 units, from low-rent tenements to high-grade stores and offices; specialized in reconstruction effort following 1936 disastrous flood and in rehabilitation work to increase net return from multi-family residences; institutional clients include First National Bank of Hartford, Dime Savings Bank of Hartford, W. T. Grant Company, Society for Savings, and Merrow Machine Company.

FRANK J. LUCHS, WASHINGTON, D. C. Born, Washington, D. C., September, 1913; Vice President and Secretary, Shannon & Luchs Company; Vice President and Secretary, Shannon & Luchs Development Company; Vice President and Treasurer, Luxmanor Building Corporation; Vice President and Secretary, "Park and Shop, Inc."; studied two years at Wharton School of Business Management, University of Pennsylvania, 1930-1932; received B.A. degree in Economics after two years of night school at George Washington University; six years' experience in general management of real estate; institutional clients include F. W. Woolworth Company, District Amusement Corporation (a subsidiary of Loew's, Inc.), Fidelity-Philadelphia Trust Company, and Acacia Mutual Life Insurance Company.

F. WALLACE STOEVER, WASHINGTON, D. C. Born, Elizabeth, New Jersey, December, 1892; Vice President in charge of property management, Shannon & Luchs Company; member, Property Management Committee, Washington Real Estate Board; member, Executive Committee, Building Owners and Managers Association of the District of Columbia; Secretary, Parking Stores, Inc.; professional territory covers District of Columbia, Maryland, Virginia, and suburbs of Washington, D. C.; studied Architectural Engineering, George Washington University, and Business Law, Southeastern University; twenty-four years' experience in the real estate field; nineteen years' experience in real estate management; started as rent collector and filled practically every position in Property Management Department; Manager, Property Management Department, Shannon & Luchs Company, for about twelve years; specializes in leasing and managing business properties; institutional clients include F. W. Woolworth Company, District Amusement Corporation (a subsidiary of Loew's, Inc.), Fidelity-Philadelphia Trust Company, and Acacia Mutual Life Insurance Company.

KENNETH S. KEYES, MIAMI, FLORIDA. Born, Morenci, Michigan, September, 1896; President, The Keyes Company; member, Board of Directors, National Association of Real Estate Boards; member, Executive Committee, Brokers Division; Member, American Institute of Real Estate Appraisers; 1937 Chairman, Brokers Division; B.A. degree, University of Michigan, 1917; twelve years' experience in leasing, managing, and selling office buildings, downtown business properties, neighborhood business properties, warehouses, industrial properties, apartments, hotels, single-family homes, and estates; institutional clients include Metropolitan Life Insurance Company, Guardian Life Insurance Company, Volunteer State Life Insurance Company, American Security & Trust Company, Washington, D. C., Brooklyn Trust Company, Brooklyn,

New York, and Girard Trust Company, Philadelphia, Pennsylvania.

JULIAN W. COOPER, TAMPA, FLORIDA. Born, Norfolk, Virginia, August, 1898; President, Warren-Henderson Realty Co., Inc.; Vice President, L. H. McIntire Investment Company, a Florida corporation; Director, Guaranty Title Company; Supervisor, Southwest Tampa Storm Sewer District; Past President, Tampa Real Estate Board; member, Tampa Rotary Club; member, Theta Delta Chi Fraternity; attended William & Mary College, Williamsburg, Virginia; fifteen years' real estate experience; five years' property management experience, including the management of residential, business, and industrial property, hotels, and apartments; institutional clients include Penn Mutual Life Insurance Company, Philadelphia, Atlantic Life Insurance Company, Richmond, American United Life Insurance Company, Indianapolis, Home Owners' Loan Corporation, Washington, D. C., Graves Investment Company, Atlanta, Allied Associated Mortgage Companies, Baltimore, Roy L. Miller, Jones-Miller Company, Brokers, Philadelphia, Orange County Trust Company, Middletown, New York, and First National Bank, Tampa, Florida.

JAY L. HEARIN, TAMPA, FLORIDA. Born, Quincy, Florida, August, 1894; President, Jay Hearin, Inc.; B.S. degree, University of Florida, 1915; in real estate business since 1924 and in business for self since 1926; experience in all phases of real estate—sales, management, maintenance, insurance, mortgage loans, new building arrangements, etc.; institutional clients include Lykes Brothers Steamship Company, Prudential Insurance Company of America, J. Warren Leach & Company, Maas Brothers, Tampa-Hillsboro Investment Company, Exchange National Bank, First Savings & Trust Company, First National Bank, Continental Illinois National Bank & Trust Company of Chicago, Palmer National Bank & Trust Company, Potter Palmer and Honoré Palmer, Trustees, First Morse Realty Company of New York, Assets Salvaging Corporation of New York, and Federal Housing Administration.

M. H. MABRY, TAMPA, FLORIDA. Born, Leesburg, Florida, June, 1888; President and General Manager, M. H. Mabry Company; President, Raybro Electric Supplies Inc.; active member, Tampa Real Estate Board; professional territory covers Tampa and outlying towns; business college education; twenty-five years' experience in real estate management; served as President and General Manager, M. H. Mabry Company, for past eight years; at present manages approximately 522 properties with 792 units covering miscellaneous types, including residences, apartments, hotels, stores, and offices; services four national mortgage and real estate accounts and two life insurance accounts.

J. E. HOLLENBECK, WEST PALM BEACH, FLORIDA. Born, Nabbs, Indiana, May, 1892; associated as an executive of Studstill & Hollenbeck, Inc.; member, Palm Beach County Real Estate Board; professional territory covers all of southern Florida; took Teachers' Training Course at Hanover College (Indiana) and taught school for one year; ten years' experience as a salesman in northwestern Ohio for Pitman Moore Company; thirteen years' experience in the real estate field; ten years' experience in real estate management; actively engaged in managing both residential and business properties; institutional clients include Metropolitan Life Insurance Company, New York City, McCrory Properties, Inc., New York City, West Palm Beach Atlantic National Bank, Florida Bank & Trust Company, West Palm Beach, West Palm Beach Chamber of Commerce, and Palm Beach Chamber of Commerce.

FRANK C. OWENS, ATLANTA, GEORGIA. Born, Greenville, South Carolina, August, 1898; Vice President and Treasurer, Draper-Owens Co.; Director, The First National Bank of Atlanta; Director, Atlanta Real Estate Board; Director, Georgia Real Estate Association; Director, National Association of Real Estate Boards; Past President, Atlanta Real Estate Board; Past President, Georgia Real Estate Association; Vice President, National Association of Real Estate Boards; B.S. degree in Electrical Engineering, Georgia School of Technology, Atlanta, Georgia; thirteen years' experience in the real estate business; institutional clients include Atlantic Life Insurance Company, Richmond, Virginia, Allied Mortgage Companies, Inc., Baltimore, Maryland, Associated Mortgage Companies, Inc., Baltimore, Maryland, Arundel Mortgage Company, Baltimore, Maryland, Assets Salvaging Corporation, New York City, Augusta National Bank, Staunton, Virginia, First National Bank, Atlanta, Georgia, Greyling Realization Corporation, New York City, Home Owners' Loan Corporation, Joseph B. Miller, Trustee, New York City, Mortgage Commission Servicing Corporation, New York City, National Mortgage Corporation, New York City, The Life Insurance Company of Virginia, Richmond, Virginia, Trust Company of Georgia, Atlanta, Georgia, and United Service & Research, Inc., Oklahoma City, Oklahoma.

ADRIAN B. SHERMAN, AUGUSTA, GEORGIA. Born, Augusta, Georgia, December, 1894; President, Sherman and Hemstreet, Inc.; Director, National Exchange Bank, Augusta, Georgia; President, Augusta Real Estate Board; in the general real estate business in Augusta, Geor-

gia, for the past sixteen years, specializing in the sale and management of the better class commercial and residential property; institutional clients include Home Owners' Loan Corporation, Georgia Railroad Bank & Trust Company, Citizens & Southern National Bank, National Exchange Bank, Tubman Home, Realty Savings Bank, Roman Catholic Society of Augusta, Masonic Building Company, and City Council of Augusta.

I. W. DILL, CARBONDALE, ILLINOIS. Born, Golconda, Illinois, December, 1882; Partner of Charles E. Dill in the Dill Investment Co.; active member, Jackson County Real Estate Board; high school graduate; ten years' experience in different departments of railroad company; fifteen years as owner of retail clothing store; partner in Dill Investment Co. since 1927; twenty years' experience in the real estate field; ten years' experience as a property manager; at present, Receiver in twenty foreclosure proceedings for the Home Owners' Loan Corporation; often acted in capacity of administrator, executor, guardian, and conservator in cases involving real estate; manages business and residential properties and supervises construction and repairs.

ARTHUR BOHNEN, CHICAGO, ILLINOIS. Born, St. Paul, Minnesota, February, 1900; President, Arthur Bohnen, Inc.; consultant to the Chicago Housing Authority, Illinois State Housing Board, and numerous other community housing organizations; Chairman, Management Committee, National Association of Housing Officials; consultant to the Public Works Administration, Housing Division, for three years; served as an officer of the Chicago Real Estate Board in several capacities and on various Board committees; graduate, University of Minnesota, 1922, B.A. degree; actively engaged in the real estate business since 1922 and very active in the promotion and construction of cooperative building in the middle twenties, placing particular emphasis upon the management angle of cooperative ownership; resident instructor in charge of the four-month training course of the National Association of Housing Officials in Washington, 1936; published several articles and pamphlets on city planning, housing, management, and accounting of large-scale operation; lecturer at the University of Minnesota, University of Michigan, and Armour Institute of Technology, Department of Architecture.

KENDALL CADY, CHICAGO, ILLINOIS. Born, Greenbay, Wisconsin, November, 1907; Secretary, Downs, Mohl & Company; Secretary, Real Estate Statistics, Inc.; associate member, Chicago Real Estate Board; professional territory covers Cook County, Illinois; graduate, University of Wisconsin, 1929, Ph.B. degree, majoring in real estate economics; M.B.A. degree in Business Administration at Northwestern University, 1930, majoring in public utilities and land economics; Director, Apartment Building Owners & Managers Association of Chicago; author of technical articles; teacher; eight years' experience in real estate management.

JAMES C. DOWNS, JR., CHICAGO, ILLINOIS. Born, Des Moines, Iowa, October, 1905; President, Downs, Mohl & Company; President, Real Estate Statistics, Inc.; President, The Institute of Real Estate Management; former Editor-in-Chief, *The Journal of Real Estate Management;* member of the faculty, The Chicago College of Commerce; member of the faculty of the Institute's Case-Study Courses in Real Estate Management presented at the University of Chicago in 1936; special lecturer at the University of Florida; sales consultant for the National Association of Real Estate Boards; twelve years' experience entirely in the management business covering all types of property, from large, commercial hotels to the smallest type of units, including special service properties, such as hospitals, theatres, office buildings, etc.

CHARLES WILLIAM EHRAT, CHICAGO, ILLINOIS. Born, Chicago, Illinois, February, 1901; Executive Vice President, Wirtz, Haynie & Ehrat, Inc.; member, Chicago Real Estate Board; professional territory covers the city of Chicago; high school and college education; fifteen years' experience in real estate business, including twelve years' in the management field; experienced in the management of elevator apartment and commercial buildings.

JOHN H. HAGERTY, CHICAGO, ILLINOIS. Born, Brooklyn, New York, January, 1896; active member, Chicago Real Estate Board; professional territory covers Illinois, Wisconsin, Michigan, Ohio, West Virginia, Missouri, and eastern Kansas; attended Law Courses at Fordham University; eighteen years' experience in the real estate field; fifteen years' experience in real estate management; self-employed during the past five years; in 1920 employed by H. Otto Claussen, doing a general brokerage business and managing neighborhood property, flat buildings, store buildings, and private residences for absentee owners; later in the employ of Realty Associates of Brooklyn, New York, in charge of defaulted specialty buildings, such as theatres, warehouses, garages, etc.; subsequently organized own business and supervised from Chicago office the management of properties of all types located in various states named above; properties managed in Chicago include Hotel Guyon, North Park Hotel, and the building known as 820 North Michigan Ave-

nue, which is designed for office occupancy, hotel, and club space.

HENRY T. HOLSMAN, CHICAGO, ILLINOIS. Born, Chicago, Illinois, November, 1901; President and Treasurer, Parker-Holsman Company; graduate, University of Chicago, B.S. degree; thirteen years' experience in the real estate business, specializing in the construction and management of apartment buildings; previously employed as architect superintendent in apartment building construction; institutional clients include New York Life Insurance Company, State Mutual Life Assurance Company, Life Insurance Company of Virginia, University of Chicago, Northern Trust Company of Chicago, First National Bank of Chicago, Chicago Title & Trust Company.

FRED M. LORISH, CHICAGO, ILLINOIS. Born, Blanchester, Ohio; Vice President and Secretary, Swan, Lorish & Caspers, Inc.; member, Chicago Real Estate Board; professional territory covers the city of Chicago; twenty-five years' experience in real estate management; experienced principally in the management of three-story, walkup and multiple-story, apartment buildings, also commercial properties.

HENRY G. HAY, JR., GARY, INDIANA. Born, Cheyenne, Wyoming, May, 1900; Manager, Trust Department, Commercial Trust Company; Director, Gary Credit Bureau; associate member, Gary Real Estate Board; professional territory covers Gary, Indiana Harbor, East Chicago, Whiting, and Hammond, Indiana; graduate, Wharton School, University of Pennsylvania, B.S. degree in Economics; completed course in Trust Functions presented by the American Institute of Banking; fifteen years' experience in the real estate field; eight years' experience in real estate management; organized and developed Property Management Department, Commercial Trust Company, operating over 175 properties of various types, including single-family dwellings, apartment buildings, commercial buildings, garages, filling stations, etc.

EDWARD B. KAELIN, HAMMOND, INDIANA. Born, Riverdale, Illinois, August, 1891; owner of firm; real estate and insurance broker; nine years' experience in managing business and residential property; many years' experience on zoning, tax matters, etc. affecting real estate.

EMERSON W. CHAILLÉ, INDIANAPOLIS, INDIANA. Born, Whiteland, Indiana, November, 1876; operates his own business; active member, Indianapolis Real Estate Board; graduate, Franklin College, 1900; professional territory covers Indianapolis, Indiana; twenty-eight years' experience in general real estate; fifteen years' experience in real estate management; managed and acted as President for the Indianapolis Industrial Center since 1931, property composing of twenty-two acres, thirty buildings, and forty manufacturing and storage tenants and owned by out-of-town financial interests; manages two downtown office buildings and a large number of loft buildings which include first-floor retail space; represents the Massachusetts Mutual Life Insurance Company in the management of Indianapolis property.

MILLARD L. HALL, INDIANAPOLIS, INDIANA. Born, Falmouth, Indiana, September, 1898; President, Hall-Hottel Co., Inc.; President, Indianapolis Real Estate Board; Vice Chairman, Appraisal Committee, Indianapolis Real Estate Board; graduate, Purdue University, B.S. degree; member, Extension Staff, University of Kentucky and Purdue University; eleven years' experience in the real estate business as the manager of property management departments for trust company and present firm.

ARTHUR S. KIRK, DES MOINES, IOWA. Born, Hiawatha, Kansas, June, 1891; Secretary-Treasurer, Chamberlain, Kirk & Co., Inc.; President, Home Savings & Loan Association; Director, Valley Savings Bank; member, Executive Committee and Board of Trustees, Drake University; Past President, Des Moines Real Estate Board; Past President, Iowa Association of Real Estate Boards; former Director, National Association of Real Estate Boards; former member, Governing Council, American Institute of Real Estate Appraisers; B.A. degree, 1914, Drake University; LL.B. degree, Drake University; M.A. degree, 1915, Harvard University; in general real estate business in Des Moines, Iowa, since January 1, 1917, starting in the property management business in 1919; lectured from time to time on real estate in the School of Commerce, Drake University, and at conventions of the Iowa Association of Real Estate Boards and the National Association of Real Estate Boards; institutional clients include Drake University, Clemens Automobile Company, Home Owners' Loan Corporation, and several large estates.

DAVID NEISWANGER, TOPEKA, KANSAS. Born, Topeka, Kansas, November, 1892; President, The Neiswanger Investment Company; Director, Prudential Investment Company, Topeka; Secretary, Meninger Sanitarium Corporation, Topeka; President, Home Finance and Realty Company, Topeka; Trustee, Washburn College, Topeka; Past President, Kansas Association of Real Estate Boards, 1937; Regional Vice President, National Association of Real Estate Boards; member, Governing Council, American

Institute of Real Estate Appraisers; graduate, Washburn College, Topeka, Kansas, B.A. degree; member, Phi Delta Theta National Fraternity; entered the real estate firm of Wilson & Neiswanger in 1914 and continuously employed, excepting for a period during the War, until 1926, when the firm was reorganized as The Neiswanger Investment Company; President, The Neiswanger Investment Company since its incorporation; the firm has maintained sales, management, and appraisal activities for many years; property management extends to all types of city real estate; institutional clients include The Equitable Life Assurance Society of the United States, Home Owners' Loan Corporation, Topeka Provident Association, Home Finance and Realty Company, Topeka, and others.

HARRY W. GOODMAN, LOUISVILLE, KENTUCKY. Born, Mason County, Kentucky, September, 1884; President, Goodman & Hambleton, Inc.; Director, Portland Federal Savings & Loan Association; appraiser, Kentucky Title Company, First National Bank, and Louisville Trust Company; Past President, Louisville Real Estate Board; Past President, Kentucky Association of Real Boards; instructor, salesmen and maintenance classes of the Louisville Real Estate Board; engaged in general real estate business particularly management for over thirty years; institutional clients include Massachusetts Mutual Life Insurance Company, Wright & Taylor, Portland Federal Savings & Loan Association, Louisville Home Federal Savings & Loan Association, Kentucky Title Company, Transylvania University, Louisville Gas & Electric Company, McDowell Building, and T. P. Taylor Estate.

GEORGE M. HAMPSON, BALTIMORE, MARYLAND. Owner, Hampson Real Estate Offices; LL.B. degree, also degree in engineering; twenty years' experience in residential construction and management of real estate.

WATSON GRANT CUTTER, BOSTON, MASSACHUSETTS. Born, Cambridge, Massachusetts, June, 1900; Building Manager and Office Manager, Watson G. Cutter & Sons; associate member, Boston Real Estate Exchange; professional territory includes Boston, Massachusetts, and vicinity; graduate, Harvard College, 1922, B.A. degree, majoring in mathematics and physics, including some engineering; M.B.A. degree from Harvard Graduate School of Business Administration, majoring in industrial management and accounting; Secretary and Director, Massachusetts Association of Real Estate Boards, 1937-1938; five and one half years' experience in the real estate field; five years' experience in real estate management; represents fourth generation of his family in the real estate business in Boston; manages principally office, store, and residential properties.

JOHN A. HOPE, BOSTON, MASSACHUSETTS. Born, Brookline, Massachusetts, June, 1896; President and Treasurer, John A. Hope, Inc.; Trustee, The Mercantile Realty Holding Trust; Trustee, The Realty Holding Trust of Boston; Trustee, Real Property Trust of Boston; Treasurer, Hope Oil Company; Treasurer, Hope Estates Corporation; Mortgage Correspondent, Massachusetts Mutual Life Insurance Company, Springfield, Massachusetts; educated at Boston University, College of Business Administration; University Extension Instructor, Department of Education, Commonwealth of Massachusetts; fourteen years' experience—six years as a mortgage broker and eight years in the management of industrial, garage, office, and mercantile real estate, including the actual operation of many garages in Greater Boston for the purpose of building up the business to sell or lease the properties; institutional clients include Charlestown Five Cents Savings Bank, Charlestown, Massachusetts, also several private trusts and privately owned commercial properties.

J. HOWARD LOUGHMAN, BOSTON MASSACHUSETTS. Born, Worcester, Massachusetts, 1899; associated with Robert A. Nordblom Management Company; professional territory covers New England States; associate member, Boston Real Estate Exchange; one year of college work; thirteen years' experience in the real estate field; nine years' experience in real estate management; duties include maintenance, leasing, selling, financing, and construction, specializing in business properties, office buildings, large apartment houses, and lofts.

JOHN NORDBLOM, BOSTON, MASSACHUSETTS. Born, Boston, Massachusetts, 1907; member of firm, Robert A. Nordblom Management Company; associate member, Boston Real Estate Exchange; professional territory covers New England States; seven years' experience in real estate management; duties include real estate management, selling, leasing and maintenance, specializing in apartments and office buildings.

ROBERT C. NORDBLOM, BOSTON, MASSACHUSETTS. Born, Boston, Massachusetts, August, 1904; President, Robert A. Nordblom Management Company; President and Director, Oliver Investment Corporation; President and Director, Insurance Building Corporation; President and Director, Robert A. Nordblom Housing Corporation; President and Director, Egremont Associates, Inc.; President and Director, Federal District Corporation; Managing Director, The

Hotel Sheraton; President and Director, The Raleigh Company; Director, Broadcasting Service Organization, Inc.; Member, American Institute of Real Estate Appraisers; Trustee, Massachusetts Board of Real Estate Appraisers; Vice President and Governing Councillor, The Institute of Real Estate Management; member, Boston Real Estate Exchange; member, Brokers Division, National Association of Real Estate Boards; Vice President and Director, Massachusetts Real Estate Exchange; licensed real estate broker, state of New York; licensed Massachusetts insurance broker; lecturer, Massachusetts Department of Education, Real Estate and Appraising, Harvard University Courses, 1933-1936; actively engaged in the real estate business since 1924, including brokerage, appraising, developing work, and management; manages commercial buildings and many apartment houses and apartment hotels in Boston, including the Hotel Sheraton and Hotel Myles Standish; maintains an office in Worcester, and also one in Washington, D. C., for the management of properties in those cities; institutional clients include Peoples Savings Bank, Worcester, Suffolk Savings Bank, Boston, John Hancock Mutual Life Insurance Company, Boston, Boston Safe Deposit and Trust Company, and New England Telephone & Telegraph Company, Boston.

JAMES MASON ROTHWELL, BOSTON, MASSACHUSETTS. Born, Brookline, Massachusetts, September, 1882; member, Boston Real Estate Exchange; Vice President, Home Savings Bank; President, Boston Real Estate Exchange; member, Building Owners & Managers Association; graduate, Harvard University, 1905, B.A. degree; professional territory covers Boston; thirty-three years' experience in the real estate management field.

WILLIAM H. DYER, BROOKLINE, MASSACHUSETTS. Born, Providence, Rhode Island, July, 1896; President, Dyer & Company, Inc.; graduate, Syracuse University, Syracuse, New York, 1921, B.S. degree; member, Delta Tau Delta Fraternity; real estate experience began as a salesman during summer vacations from college; later turned to the maintenance of property owned by two large textile corporations in Mohawk, New York; later, after a short time with a large Boston real estate firm in the capacity of Property Manager, entered business with other experienced associates from the same firm and decided to specialize in management service; business today includes managing of properties for ten savings banks, one life insurance company, and several private clients, besides owning and managing considerable amount of own firm's real estate; management business embraces single-family homes, estates, apartment and office buildings, stores, and factories in eastern Massachusetts cities and central New York State.

THOMAS J. KEDIAN, BROOKLINE, MASSACHUSETTS. Born, Boston, Massachusetts, May, 1908; associated with Clifford V. Miller, Inc.; member, Boston Real Estate Exchange; professional territory covers New England States; academic education at Philips Exeter Academy, Dartmouth College, and Harvard University; ten years' experience in real estate management; manages multiple-unit apartment buildings and commercial and factory properties throughout metropolitan Boston; also experienced in the management of theatres.

CLIFFORD V. MILLER, BROOKLINE, MASSACHUSETTS. Born, Dodge Centre, Minnesota, February, 1903; President and Treasurer, Clifford V. Miller, Inc.; member, Boston Real Estate Exchange; attended college for two years, Boston University and Northeastern University; professional territory covers metropolitan Boston, including property in Medford, Cambridge, Brighton, Brookline, and Natick; experienced in the management of unfurnished and furnished apartments, also stores.

BENJAMIN A. RICHARDSON, BROOKLINE, MASSACHUSETTS. Born, Beachmont, Massachusetts, December, 1889; associated with Clifford V. Miller, Inc.; associate member, Boston Real Estate Exchange; professional territory covers state of Massachusetts; twenty-three years' experience in the real estate field; fifteen years' experience in real estate management; manages multiple-unit apartment properties.

CHARLES W. TURNER, LYNN, MASSACHUSETTS. Born, Saugus, Massachusetts, June, 1908; owner and operator, Harry T. Turner Company; member, Lynn Real Estate Exchange; member, Lynn Board of Underwriters; associate member, American Institute of Electrical Engineers; B.S. degree in Electrical Engineering, Massachusetts Institute of Technology; experienced in the management of stores, offices, factories, and other mercantile property, as well as apartment houses, concentrating on downtown buildings; institutional clients include New York Life Insurance Company, New England Telephone & Telegraph Company, and Salem Five Cents Savings Bank.

HARRY A. GILBERT, SOMERVILLE, MASSACHUSETTS. Born, Westfield, Vermont, February, 1888; owner of firm; President and Treasurer, Lynwood Apartments, Inc.; President and Treasurer, Conlex Apartments, Inc.; President and Treasurer, Lowell Manor, Inc.; Director, Massachusetts Real Estate Exchange; member,

Boston Real Estate Exchange; Director and Past President, Middlesex Apartment Owners Association, Inc.; Corporator, Cambridgeport Savings Bank; trustee and member, Board of Investment, Boston Penny Savings Bank; in business for the past nineteen years; connected with a large real estate firm with offices in Cambridge and Boston from 1919 to 1932; own real estate and insurance business since 1932; experience in selling, leasing, managing, construction loan and permanent financing, and appraising of nearly all kinds of property; owns and operates several large apartment properties and manages several public garages; institutional clients include Cambridgeport Savings Bank, Clinton Savings Bank, Boston Penny Savings Bank, and the John Hancock Mutual Life Insurance Company.

HENRY M. CLARK, JR., SPRINGFIELD, MASSACHUSETTS. Born, Ware, Massachusetts, July, 1893; member of the firm, Henry M. Clark, Realtors; trustee, Trinity Realty Trust; trustee, Eastern States Exposition; member, Aviation Development Committee, Springfield Chamber of Commerce; Director, Springfield Real Estate Board; former Director, Massachusetts Association of Real Estate Boards; active member, Springfield Real Estate Board; professional territory covers the Connecticut River Valley from Greenfield, Massachusetts, to Middletown, Connecticut; attended Rensselaer Polytechnic Institute, Troy, New York; graduate, Sheffield Scientific School, Yale University, Ph.D. degree; graduate, University Extension Course in Real Estate Practice; graduate, Springfield Real Estate Board Course in Real Estate Law; seventeen years' experience in real estate field; nine years' experience in real estate management; institutional clients include The Equitable Life Assurance Society of the United States, New England Mutual Life Insurance Company, Manufacturers Trust Company, Brewer Estate of Chicago, and the Woman's Shop Building, Springfield, Massachusetts.

JOHN A. DODDS, DETROIT, MICHIGAN. Born, Toledo, Ohio, November, 1905; owner, John A. Dodds Company; Chairman, Slum Clearance Committee, Detroit Housing & Planning Council; Vice President, Management Division, Detroit Real Estate Board; Chairman, Purchasing Committee, Building Owners and Managers Association of Detroit; twelve years' experience in the management of office, commercial loft, and apartment buildings, specializing in office loft and commercial building management.

GUY S. GREENE, DETROIT, MICHIGAN. Born, Ypsilanti, Michigan, May, 1885; President, Hannan Real Estate Exchange, Inc.; Director, National Association of Real Estate Boards; President, Detroit Real Estate Board, 1924; President, Michigan Real Estate Association, 1926; B.S. degree in Mechanical Engineering, University of Michigan; started with Hannan Real Estate Exchange, Inc., in 1911 as broker and became President and General Manager in 1918; institutional clients include Union Central Life Insurance Company, Prudential Insurance Company of America, Keswick Corporation (Maryland Casualty Company), Baltimore, Maryland, Allied & Associated Mortgage Corporation (United States Fidelity & Guaranty Company), Baltimore, Maryland, and others.

HIRAM P. HOLMES, DETROIT, MICHIGAN. Born, Northville, Michigan, November, 1894; President, H. P. Holmes, Inc.; Secretary and Treasurer, Glynnwood Apartments Company; broker member, Detroit Real Estate Board; Vice Chairman, Property Management Division and Chairman, Committee on Experience Exchange, Detroit Real Estate Board; graduate, University of Michigan, 1917, B.A. degree in Business Administration; sixteen years' experience in the real estate field, including buying, selling, building, writing of specifications, supervising construction, and managing houses, costing from $4,000 to $35,000, duplexes, flats, and multiple dwellings of both ordinary and fireproof construction; six years' experience in operating a property management company, including considerable remodeling and rehabilitation work and specializing in the management of apartment buildings and residential hotels; considerable appraisal work for Public Trust Commission, Reconstruction Finance Corporation, banks, estates, and private individuals; clients include Provident Mutual Life Insurance Company, Philadelphia, The State Mutual Assurance Company, Worcester, Massachusetts, Metropolitan Service Corporation, Newark, New Jersey, receivers, trust companies, estates, and private individuals.

LEE K. SILLOWAY, DETROIT, MICHIGAN. Born, Kansas, December, 1896; Vice President and Treasurer, Holden & Reaume, Inc.; Vice President and Treasurer, James S. Holden Company; member, Detroit Real Estate Board; professional territory covers Detroit and environs; twenty-two years' experience in real estate management.

EDWARD G. HACKER, LANSING, MICHIGAN. Born, Rochester, Michigan, May, 1893; President and General Manager, Edward G. Hacker Company; President, Lansing Rotary Club; First Vice President, Lansing Chamber of Commerce; member, Governing Council, The Institute of Real Estate Management; Member, American Institute of Real Estate Appraisers;

Past President, Lansing Real Estate Board; Past President, Michigan Real Estate Association; Past President, The Institute of Real Estate Management; member, Board of Directors, National Association of Real Estate Boards, 1931-1937; Past Vice President and member, Board of Directors, Lansing Y.W.C.A.; nineteen years' experience in the general real estate business, specializing in sales, leases, rentals, appraisals, home building, subdividing, mortgage loans, and real estate management; specializes in the management of single-family houses, duplexes, apartment houses, stores, office buildings, parking lots, and warehouses; institutional clients include Metropolitan Life Insurance Company, Home Owners' Loan Corporation, University of Michigan, and Michigan Trust Company, Grand Rapids.

C. ROWLAND STEBBINS, LANSING, MICHIGAN. Born, Lansing, Michigan, February, 1903; Secretary, Treasurer, and Manager, Advance Realty Company; Mortgage Loan Correspondent, Midland Mutual Life Insurance Company; active in Junior Chamber of Commerce; attended Dartmouth College, Hanover, New Hampshire, 1921-1925; graduate, University of Michigan, 1926; twelve years' experience in real estate business; management experience in apartments, single-family dwellings, stores, and miscellaneous commercial property; now managing several hundred Lansing properties and active in building homes and in subdivision work; institutional clients include Ohio National Life Insurance Company, Westphalia State Bank, and Auto Owners Insurance Company.

EBEN R. PRICE, MINNEAPOLIS, MINNESOTA. Born, Mexico, Missouri, September, 1887; President, General Management Company; Vice President, North Central Region, The Institute of Real Estate Management, and Chairman of its Experience Exchange Committee; in the banking business until 1916, in the mortgage loan business, handling both farm and city properties on an extensive scale, until 1922, and since then actively engaged in the mortgage loan business on city properties and the management of city and income properties; clients include Penn Mutual Life Insurance Company, United States Fidelity and Guaranty Company, Allied Mortgage Companies, Inc., Associated Mortgage Companies, Inc., several large estates, banks, bankers, and some prominent and large individual property owners of the Twin Cities.

JAMES R. THORPE, MINNEAPOLIS, MINNESOTA. Born, Minneapolis, Minnesota, January, 1903; Vice President in charge of management, Thorpe Bros. Inc.; graduate, Princeton University, B.A. degree; connected with Thorpe Bros. Inc., for the last fourteen years, in the management division primarily, but also with the other lines of the real estate business, including subdivision work, mortgage loans, insurance, etc.; management business covers various classes of properties from the cheapest houses to all kinds of multiple dwellings, all types of business properties, stores, offices, lofts, warehouses, etc.; representative for a number of large eastern life insurance companies in the management of properties and as sales and mortgage correspondent, also for many individuals, banks, and trust companies.

R. D. THURESSON, MINNEAPOLIS, MINNESOTA. Born, Clinton, Iowa, May, 1903; associated with General Management Company; member, Minneapolis Real Estate Board; professional territory covers Iowa, Minnesota, and Wisconsin; approximately six years' experience in the field of real estate management; manages various types of properties.

LEON T. ROGERS, JACKSON, MISSISSIPPI. Born, Collins, Mississippi, January, 1895; owner and manager of firm; member, Jackson Chamber of Commerce; appraiser, Lamar Life Insurance Company, Jackson, Mississippi; high school and commercial course at Bowling Green Business University, Bowling Green, Kentucky; attended the Institute's Case-Study Courses in Real Estate Management at the University of Chicago in 1936 and also Case-Study Course I presented by the American Institute of Real Estate Appraisers at Columbia University in 1937; actively engaged in the general real estate business for the past five years with special emphasis to property management in the handling of all types of commercial and residential property.

GEORGE M. BLISS, KANSAS CITY, MISSOURI. Born, Kansas City, Missouri, May, 1890; active member, Real Estate Board of Kansas City; professional territory covers western Missouri and eastern Kansas; Member, American Institute of Real Estate Appraisers; Director, Hotel Baltimore Company; twenty-six years' experience in the real estate field; twenty years' experience in real estate management; properties managed include hotels, elevator and walk-up apartments, business buildings, duplexes, and residences; also extensive experience in building construction, platting subdivisions, selling, financing, managing, renting, insuring, and appraising.

JOHN FRANCISCUS, ST. LOUIS, MISSOURI. Born, St. Louis, Missouri, July, 1906; Secretary, Franciscus Realty Company; Vice President, Franciscus-Maginn, Inc.; active member, St. Louis Real Estate Exchange; profes-

sional territory covers St. Louis City and County; attended St. Louis Country Day School and Princeton Preparatory School; graduate, Western Military Academy; twelve years' experience in real estate management; manages apartments, running in price from $10 to $30 per room, and flat buildings throughout the city; also manages industrial properties.

EMIL M. JECMEN, ST. LOUIS, MISSOURI. Born, St. Louis, Missouri, November, 1899; Vice President in charge of management, Wenzlick Sales & Management Organization, Inc.; active member, St. Louis Real Estate Board; professional territory covers St. Louis and vicinity; completed evening course in Accounting and Commercial Law at Central High School and courses in Elementary Banking, Banks and Banking, Banking Law, and Loans and Investments presented by the American Institute of Banking; nine years' experience in real estate management field, covering flats, tenements, apartments, commercial properties, parking lots, etc.

LOUIS MAGINN, ST. LOUIS, MISSOURI. Born, St. Louis, Missouri, November, 1899; President, Franciscus-Maginn, Inc.; First Vice President, St. Louis Real Estate Exchange, 1936; formerly Secretary-Treasurer, Mortgage Bankers Association of St. Louis; entered real estate business in 1924 as Assistant Treasurer of Franciscus Realty Company (since dissolved); specialized in the management of apartments and commercial properties for past ten years; manages properties for several trust companies and estates and one large insurance company.

ELLIOTT S. MILLER, ST. LOUIS, MISSOURI. Born, Evanston, Illinois, January, 1894; President, Real Estate Management Company; Secretary and Director, Parkview Building Corporation; Secretary, Locel Realty Company; Director, Chester B. Stem, Inc.; graduate, University of Illinois, 1916; sixteen years' management experience in the handling of office and apartment buildings and loft and industrial properties; institutional clients include Western & Southern Life Insurance Company, Cincinnati, State Life Insurance Company, Indianapolis, Missouri Botanical Garden, St. Louis, and Chicago Title & Trust Company, Chicago.

DELBERT WENZLICK, ST. LOUIS, MISSOURI. Born, St. Louis, Missouri, October, 1890; President, Wenzlick Sales & Management Organization, Inc.; President, St. Louis Real Estate Trust Company; President, Wenzlick Mortgage and Investment Company; President, Wenzco Insurance Agency, Inc.; President, Albert Wenzlick Real Estate Company; President, Excelsior Press Brick Company; President, Carwood Realty Company; President, Woodland Realty Company; President, Meryl Realty and Investment Company; Member, Governing Council, The Institute of Real Estate Management; Vice President, South Central Region, The Institute of Real Estate Management; Director, Regional Planning Commission of St. Louis; former Director, St. Louis Real Estate Exchange; former special lecturer, National Association of Real Estate Boards; former Director, Fire Insurance Agents' Association of St. Louis; member, President Hoover's Conference on Home Building and Home Ownership; former Director, Better Business Bureau of St. Louis; former Vice Chairman, Office Building Division, and Chairman, Apartment House Division, Accounting and Experience Exchange Committee, National Association of Building Owners and Managers; Chairman, Property Management Division, National Association of Real Estate Boards, during the reorganization of that Division into The Institute of Real Estate Management and a member of the Institute's first Governing Council; former Director, National Association of Real Estate Boards; Organizer and President for first four years of Real Estate Analysts, Inc., a statistical, analytical, and appraisal organization, operating nationally with headquarters at St. Louis, Missouri; twenty-eight years' experience in every phase of real estate activities.

THEODORE F. APPLEBY, JR., ASBURY PARK, NEW JERSEY. Born, Asbury Park, New Jersey, May, 1896; President, T. Frank Appleby Agency, Inc.; Treasurer and Past President, Asbury Park Rotary Club; Vice President, New Jersey Association of Real Estate Boards; President, Monmouth County Real Estate Board; attended Asbury Park public schools, later a student at Bordertown Military Academy, Bordertown, New Jersey, and a member of the 1917 class at Amherst College, Amherst, Massachusetts; served a year's apprenticeship with the Connecticut Fire Insurance Company, Hartford, Connecticut, in 1915; entered father's employ, with the T. Frank Appleby Company, 1916; assumed the presidency of the T. Frank Appleby Agency, Inc., at the time of father's death in 1924; assumed property management work in 1932; manages commercial properties, business developments, apartment houses, stores, dwellings, and several large hotels; institutional clients include Home Owners' Loan Corporation, Department of Banking and Insurance, State of New Jersey, and five large banking institutions of Newark and New York.

EDWARD D. GOTTLIEB, ATLANTIC CITY, NEW JERSEY. Born, Philadelphia, Pennsylvania, September, 1899; General Manager and Vice President, Stanley Atlantic Realty Co.; Di-

rector, Atlantic City Real Estate Board; in the real estate business fourteen years, specializing in city properties and the managing of a large number of store properties, apartment houses, hotels, large rooming houses, and residential properties; institutional clients include the Metropolitan Life Insurance Company, Fidelity Mutual Life Insurance Company, Penn Mutual Life Insurance Company, The Pennsylvania Company, and other institutions and trust companies.

RUSSELL C. RONEY, ATLANTIC CITY, NEW JERSEY. Born, Philadelphia, Pennsylvania, October, 1896; General Manager, Schmeidler organization; active member, Atlantic City Real Estate Board, and Secretary, 1926; consultant and appraiser for building and loan associations; attended, Wharton School, University of Pennsylvania; completed one year at University of Aix-en-Provence, France; established real estate office in Atlantic City, 1922, and from that year to 1931 conducted a general real estate business, including building; joined the Schmeidler organization 1931 and devoted all efforts to property management, particularly institutional accounts; single-family dwellings and apartment houses comprise approximately 90 per cent of properties managed; institutional clients include Equitable Trust Company, Atlantic City, Equitable Building and Loan Association, Islanders Building & Loan Association, Atlantic City Loan and Building Association, New Jersey Department of Banking and Insurance, Philadelphia National Bank, Provident Trust Company of Philadelphia, Fidelity Union Trust Company of Newark, National Newark and Essex Banking Company, and New Jersey Realty Company.

J. WILLIAM MARKEIM, CAMDEN, NEW JERSEY. Born, Chester, Pennsylvania, 1895; President, Markeim-Chalmers-Ludington, Inc.; Vice President and Secretary, Central Airport, Inc.; President, J. W. Markeim Construction Company; member, Camden County Park Commission; member, Philadelphia Real Estate Board and Camden Real Estate Board; graduate, University of Pennsylvania; also attended Temple College, Barks Business School, and Brown Preparatory School; taught Finance and Advanced Accounting, business college; fifteen years' experience in the real estate field, including ten years in real estate management; management experience covers residences, retail stores, theatres, lodges, halls, factories, apartment buildings, etc.

CHARLES R. MYERS, 2nd, CAMDEN, NEW JERSEY. Born, Camden, New Jersey, October, 1898; President, Chas. R. Myers & Co., Inc.; former member, American Chemical Society; member, local real estate board, State Association, and National Association of Real Estate Boards; member, Society of Residential Appraisers; Secretary, local real estate board for three years; graduate, Tome Institute, Port Deposit, Maryland; graduate, Massachusetts Institute of Technology, B.S. degree, Chemical Engineering Practice; Editor, *Camden County Realtor* for three years; research work for industrial concerns, such as Bethlehem Steel Company, Merrimac Chemical Company, Revere Sugar Refinery, Eastern Manufacturing Company, and Penobscot Chemical Pulp and Fiber Company; active in the management of residential, commercial, and industrial properties in all its phases for thirteen years, including reconditioning, renting, and selling, drawing specifications, and supervising all repair work; institutional clients include The Equitable Life Assurance Society of the United States, The Fidelity Mutual Life Insurance Company, Philadelphia, Corn Exchange National Bank and Trust Company, Philadelphia, Integrity Trust Company, Philadelphia, Equitable Trust Company, Wilmington, Receivers for the International Re-Insurance Corporation, and building and loan associations.

CHARLES ARMEL NUTTER, CAMDEN, NEW JERSEY. Born, town of Milford, county of Kent, state of Delaware, November, 1900; President, Nutter Mortgage Service; Director, Camden County Chamber of Commerce, member, Kappa Alpha Fraternity (southern); Past President, Camden County Real Estate Board; Vice President, New Jersey Association of Real Estate Boards for District No. 5; Legislative Chairman, Camden County Real Estate Board; member, Admissions Committee, The Institute of Real Estate Management; New Jersey State Chairman, 1938 Membership Committee, Mortgage Bankers Association; graduate, University of Delaware, 1923, B.S. degree; attended Temple University Law School for two years and worked in a law office for seven years, managing about $24,000,000 worth of mortgages; six years' experience in real estate and thirteen years' experience in the real estate and mortgage business, including the management of apartments, dwellings, stores, combinations, some industrials, and very few office building sites; institutional clients include Phoenix Mutual Life Insurance Company, Hartford, The Penn Mutual Life Insurance Company, Philadelphia, The Girard Life Insurance Company, Philadelphia, The Provident Trust Company, The Provident Mutual Life Insurance Company, Philadelphia, The National Commercial Title and Mortgage Guaranty Company, Newark, The City National Bank and Trust Company, Salem, The Salem National Bank and Trust Company, Salem, The Burlington County Trust Company, Moorestown, The Guarantee Trust Company, Atlantic City, The First Cam-

den National Bank and Trust Company, Camden, The Camden Safe Deposit and Trust Company, The Farmers National Bank, Mount Holly, and The Centenary Fund and Preachers' Aid Society of the New Jersey Annual Conference of the Methodist Episcopal Church.

LEON E. TODD, CAMDEN, NEW JERSEY. Born, Camden, New Jersey, November, 1893; President, Leon E. Todd, Inc.; Developer and General Manager, Medford Lakes-in-the-Pines, Burlington County, New Jersey; graduate, Peirce School of Philedalphia, with degree in Business Administration; Past President, Camden County Real Estate Board, 1923 and 1924; Past President, New Jersey Association of Real Estate Boards, 1928; Vice President, National Association of Real Estate Boards, 1933-1935; member, New Jersey Chapter, The Institute of Real Estate Management; member, Society of Residential Appraisers; approved appraiser, Reconstruction Finance Corporation; fee appraiser, Home Owners' Loan Corporation; Contract Management and Sales Broker, Home Owners' Loan Corporation in Camden County; property manager for a number of local building and loan associations.

HENRY M. LESHER, EAST ORANGE, NEW JERSEY. Born, Fremont, Ohio, November, 1897; owner of firm; member, Kiwanis Club, East Orange; Chairman, Management Committee, Board of Realtors of the Oranges and Maplewood; Chairman, Real Estate Committee, Echo Building & Loan Association, Newark; member, Toastmasters Club, Montclair, New Jersey; actively engaged in selling, leasing, remodeling, rehabilitating, and managing real estate since 1924; experienced in the following types of property: apartment houses, one-, two-, three,- four-, and six-family dwellings, stores, offices, and public garages; institutional clients include Bankers Trust Company, New York City, Kings County Trust Company, Brooklyn, New York, Home Life Insurance Company, New York City, National Newark & Essex Banking Company, Newark, Echo Building & Loan Association, Newark, Fidelity Union Trust Company, Newark and East Orange, Savings Investment & Trust Company, East Orange, and Bloomfield Bank & Trust Company, Bloomfield, New Jersey.

GEORGE W. SEILER, JR., EAST ORANGE, NEW JERSEY. Born, Brooklyn, New York, 1902; Secretary, Frank H. Taylor & Son, Inc., and in complete charge of the Management Department which has a personnel of seventeen people; former Secretary, Board of Realtors of the Oranges and Maplewood; member, Property Management Committee, and Chairman, Forms Management Committee, Board of Realtors of the Oranges and Maplewood; graduate, Newark Fine Arts School; took special course in drafting plans for apartment houses, school buildings, bank buildings, etc.; took Management Course at Columbia University; professional territory covers Essex County, New Jersey; engaged in large building operations, 1928-1930; fifteen years' experience in the real estate field; ten years' experience in real estate management; specializes chiefly in apartment house and commercial building management; extensive experience in reconditioning and rehabilitating; institutional clients include The Prudential Insurance Company of America, Home Owners' Loan Corporation, Fidelity Union Trust Company, Newark, Savings Investment & Trust Company, East Orange, Home Life Insurance Company, New York City, Colonial Life Insurance Company, and Commercial Trust Company of New Jersey.

HARRY A. TAYLOR, EAST ORANGE, NEW JERSEY. Born, East Orange, New Jersey, February, 1894; Vice President and Partner, Frank H. Taylor & Son, Inc.; Director, Building and Loan Association; Real Estate Advisor to the Banking and Insurance Commissioner, State of New Jersey; Consultant to the Comptroller of the Treasury, United States Government; Loan Correspondent, Home Life Insurance Company; Member, American Institute of Real Estate Appraisers; Past President, New Jersey Association of Real Estate Boards; Director, National Association of Real Estate Boards; Past President, The Institute of Real Estate Management; Governing Councillor, The Institute of Real Estate Management; B.S. degree; Dean of the Institute's Case-Study Courses in Real Estate Management presented at the University of Chicago in 1936; lecturer on real estate management at Columbia University and Rutgers University; author of various articles on real estate practice and management; author of texts for the Institute's Case-Study Courses in Real Estate Management; speaking activities for the past ten years before professional groups, real estate conferences, and special sales clinics; twenty years' real estate experience in managing all types of properties for individuals, banking institutions, life insurance companies, and building and loan associations; institutional clients include Home Life Insurance Company, The Prudential Insurance Company of America, The Equitable Life Assurance Society of the United States, Colonial Life Insurance Company, Fidelity Union Trust Company, Newark, Commercial Trust Company, Jersey City, Savings, Investment and Trust Company, East Orange, Home Owners' Loan Corporation, and also the Department of Banking & Insurance, State of New Jersey, for properties in liquidation.

FRANK J. BROWN, ELIZABETH, NEW JERSEY. Born, New York, New York, March, 1896; President, Brown & Brown, Inc.; President, Brown Realty Company; member, Elizabeth Real Estate Board; member, Land Developers and Home Builders Division, National Association of Real Estate Boards; actively engaged for twelve years in the management of all types of residential and commercial properties; institutional clients include Fidelity Union Trust Company of Newark, Commercial Trust Company of Jersey City, and Mt. Prospect Building and Loan Association of Newark.

R. MASON KIRKLAND, ELIZABETH, NEW JERSEY. Born, Eizabeth, New Jersey, May, 1891; President, R. J. Kirkland & Son; in the real estate business for twenty-two years, specializing in the appraisal and management of single- and multiple-family residences and business and apartment properties; institutional clients include the Department of Banking & Insurance, The Elizabeth Trust Company, and The Fourteenth Ward Building & Loan Association of Newark.

BERTRAM B. MILLER, ELIZABETH, NEW JERSEY. Born, Elizabeth, New Jersey, February, 1882; President, B. B. Miller & Company; Charter Member, American Institute of Real Estate Appraisers; Past Treasurer, New Jersey Association of Real Estate Boards; Past President and present Treasurer, Elizabeth Real Estate Board; member, national, state, and county associations of insurance underwriters; Director, Merchants' Building & Loan Association; Director, Elizabeth Chamber of Commerce; Director, Elizabeth General Hospital; early activities limited to the renting and selling of real estate, but in 1910 broadened work to include the management of properties for private owners and local corporations; in 1930 management department of firm extended its scope by serving several nationally known real estate owners as clients, including The Prudential Insurance Company of America, Metropolitan Life Insurance Company, The Equitable Life Assurance Society of the United States, and the Home Owners' Loan Corporation.

JAMES ROSENSOHN, ELIZABETH, NEW JERSEY. Born, Passaic, New Jersey, 1900; President and Treasurer, James Rosensohn, Inc.; member, Elizabeth Real Estate Board; Associate Member, American Institute of Real Estate Appraisers; licensed real estate broker for sixteen years in the state of New Jersey; served apprenticeship as architectural draftsman between the years 1920 and 1925 in the office of Hyman Rosensohn, Architect, Newark, New Jersey; received elementary architectural design at Columbia University, Extension Division; received technical real estate appraisal training at Rutgers University, Extension Division; field superintendent in architectural office between the years 1925-1927; past eight years specialized in leasing and managing of central business properties; now managing representative of office buildings, store and loft buildings, and multi-family and single-family dwellings; independent fee appraiser for the Home Owners' Loan Corporation from the inception of said corporation; at present management and sales broker for Home Owners' Loan Corporation, Emerald Building and Loan Association of Elizabeth, Union County Trust Company of Elizabeth, Jordan Building and Loan Association of Newark, and Estate of Louis F. Hersh, Elizabeth, New Jersey.

MAX TIEGER, ELIZABETH, NEW JERSEY. Born, Lawrence, Massachusetts, May, 1895; President and Treasurer, Max Tieger & Co.; Vice President, New Jersey Association of Real Estate Boards; Past President, Elizabeth Real Estate Board; Member, American Institute of Real Estate Appraisers; Senior Member, Society of Residential Appraisers; Appraiser and Tax Consultant, City of Elizabeth; actively engaged in the real estate business since 1920, including building, selling, financing, appraising, and managing of residential, commercial, and industrial properties; institutional clients include Fidelity Union Trust Company, Newark, Union County Savings Bank, Elizabeth, National Mortgage Corporation, New York City, Series JL-1 Trustees, New York City, Perth Amboy Holding Company, Perth Amboy, Leviathan Building & Loan Association, Newark, Upright Building & Loan Association, Elizabeth, Crystal Building & Loan Association, Elizabeth, McKesson-Roeber-Kuebler, Newark, and Brownstone Corporation, Elizabeth.

HAROLD W. CHEEL, CHEELCROFT, HO-HO-KUS, NEW JERSEY. Born, Ridgewood, New Jersey, June, 1897; President, Cheel Management, Inc., and Cheel Construction Co., Inc., developers of Cheelcroft at Ho-Ho-Kus, New Jersey; operates real estate and insurance business in addition under name of Harold W. Cheel; graduate, Sheffield Scientific School, Yale University, 1918, with a Ph.B. degree, and a degree of mechanical engineer from the same institution in 1921; besides building operations, manages properties for the Fidelity Union Trust Company, Newark, National Commercial Title & Mortgage Guaranty Company, Newark, Chemical Bank & Trust Company of New York City, Clarkson College, Potsdam, New York, Citizens First National Bank & Trust Company, Ridgewood, National Newark & Essex Banking Company, Newark, and several other estates and private clients.

SEELY CADE, JERSEY CITY, NEW JERSEY. Born, Red Bank, New Jersey, January, 1892; President, Seely Cade, Inc.; Governor, Jersey City Real Estate Board; attended grade schools and high school in Asbury Park, later going to Mercersburg Academy in Pennsylvania; majored in Finance at Packard College of Banking & Finance, New York City; actively engaged in the various branches of real estate since 1920, specializing intensely in management of all types of properties since 1927; institutional clients include The Prudential Insurance Company of America, Union Central Life Insurance Company, Cincinnait, Ohio, Jefferson Trust Company, Hoboken, Mechanics Trust Company, Bayonne, Amalgamated Building & Loan Association, Newark, Jefferson Building & Loan Association of Hoboken, and Department of Banking & Insurance, State of New Jersey.

DANIEL E. C. SOMERS, JERSEY CITY, NEW JERSEY. Born, Jersey City, New Jersey, December, 1892; owner, D. E. C. Somers, Inc.; President, Veterans' Building and Loan Association, Jersey City; President, Sun Holding Company; Treasurer, The Cranilbursom Company; charter member, New Jersey Chapter No. 1, American Institute of Real Estate Appraisers; Past President, Jersey City Real Estate Board; member, Industrial Real Estate Brokers Association of the Metropolitan Area; business founded in 1918, and for the past eight years D. E. C. Somers, Inc., has specialized in the management of properties; professional territory covers Hudson County; manages all types of residential property, from one-family dwellings to forty-family apartment buildings; institutional clients include Home Owners' Loan Corporation (Bergen area), The Equitable Life Assurance Society of the United States, Plainfield Trust Company; Commercial Trust Company of New Jersey, Provident Institution for Savings, Fifth Ward Savings Bank, Hudson Trust Company, and many other banking institutions, building and loan associations, and estates, as well as individuals.

HARRY A. WILLSON, MERCHANTVILLE, NEW JERSEY. Born, Point Rock, New York, November, 1886; owner of firm; served as assessor for the township of Pennsauken, Camden County, New Jersey, for the last eight years; Past President, Camden County Real Estate Board; graduate, Georgetown University, LL.B. degree, 1910, LL.M. degree, 1911; admitted to Supreme Court of District of Columbia, July 6, 1910; admitted to United States District Court, Eastern District of Missouri, February 26, 1915; admitted to United States Supreme Court, April 15, 1919; fifteen years' experience in general real estate business in renting, selling, placing of small mortgages, handling of insurance of all kinds (excepting life), and managing private homes for out-of-town owners, properties for building and loan associations, and small apartment buildings and several stores and public garages.

DAVID CRONHEIM, NEWARK, NEW JERSEY. Born, Hoboken, New Jersey, December, 1891; owner of firm; Vice President, Newark Real Estate Board; Director, West End Building & Loan Association; Director, several other building and loan associations; Treasurer, Fourth Ward Building & Loan Association; Mortgage Correspondent, Connecticut Mutual Life Insurance Company; President, David Cronheim Agency, fire and life insurance; office established forty years ago by Siegfried Cronheim, father; in the business as head of firm for the last twenty-six years; handles every phase of the real estate buiness; management department handles several thousands of properties, containing approximately 15,000 tenants, including one-family houses to one-hundred-family apartment buildings, factories, stores, etc.; clients include many individuals and forty financial institutions, among which is the West End Building & Loan Association, the largest in New Jersey.

EDWARD B. MC CAFFREY, NEWARK, NEW JERSEY. Born, Lancaster, New Hampshire, December, 1892; Vice President, Abeles-Stevens, Inc.; graduate, Holy Cross College, Worcester, Massachusetts, with B.A. degree; attended Fordham University School of Law, New York City, for two years; instructor in Latin, Fordham University; fourteen years' real estate experience; institutional clients include The Prudential Insurance Company of America, Fidelity Union Trust Company, National Newark & Essex Banking Company; National Commercial Title & Mortgage Guaranty Company, and Firemen's Insurance Company of Newark.

HARRY J. STEVENS, NEWARK, NEW JERSEY. Born, Newark, New Jersey, December, 1886; Director, Federal Home Loan Bank of New York; Vice President, New Jersey Association of Real Estate Boards; Past President, Real Estate Board of Newark; member, Real Estate Commission of New Jersey; Secretary, Holland and Trustworthy Building and Loan Associations; Member, American Institute of Real Estate Appraisers; member, Society of Residential Appraisers; Chairman, Management Division, New Jersey Building & Loan League; member, Real Estate Board of Newark; professional territory covers Newark and its suburbs, including East Orange, Orange, West Orange, Maplewood, South Orange, Irvington, Union, and Millburn; graduate, Newark High School; attended Rutgers University Extension Courses and New York

University; twenty-seven years' experience in real estate management; experienced in managing properties of all types, including one-family dwellings to seventy-two-family apartment buildings.

CRISTINE B. NOLAN, NORTH BERGEN, NEW JERSEY. Born, North Bergen, New Jersey, April, 1887; President, James Nolan, Inc.; Director, First National Bank of North Bergen; assisted husband, the late James Nolan, with the insurance and real estate business for ten years before his death; Past President, Underwriters' Association of Hudson County, and present Secretary-Treasurer; Secretary, North Hudson Real Estate Board; institutional clients include the Bayonne Trust Company, Commercial Building & Loan Association, Provident Institution for Savings, Hudson City Savings Bank, First National Bank of North Bergen, and others.

SAMUEL P. VOUGHT, PATERSON, NEW JERSEY. Born, November, 1883; owner of firm; President, Manor Ridge Land Company; Director, small local loan company; President, Passaic County Real Estate Board, five years, 1923-1928; thirty-four years' real estate experience, including the managing of multi-family elevator and walk-up apartments, one- and two-family houses, stores, etc.; also experienced in land developing, appraising, selling, and leasing of residential and business properties; institutional clients include banks, life insurance companies, governmental agencies, and the Federal and State governments.

WILLIAM G. McDOWELL, PLAINFIELD, NEW JERSEY. Born, Stapleton, New York, August, 1887; owner of firm; President, The State Insuring Agency, Inc.; Secretary, Industrial Location Commission; Chairman, Research Advisory and City Planning Commission of the City of Plainfield; Member, Executive Committee, Union County Planning Commission; Chairman, City Committee for Acquisition of Land for County Park Purposes; member, Traffic Committee and Mayor's Committee on Housing; Member, Board of Governors, Plainfield Area Safety Council; Past President, Plainfield Real Estate Board; member, local, state, and national insurance agents associations; Member, American Institute of Real Estate Appraisers and Institute's 1938 Local Chapters Committee; attended grade school and high school and special courses at Beaune University and the University of Chicago; Manager, Real Estate Department, The State Trust Company, 1919-1929; nine years' experience in the management of real estate for financial institutions, corporations, and estates, handling private homes, apartments, and mercantile and industrial properties; twelve years' experience as a fire prevention rating and underwriting inspector and appraiser; appraised properties extensively throughout the state, principally in the Plainfield area, for the Federal, State, and City governments and for corporations and estates.

JESSE G. MULFORD, PLAINFIELD, NEW JERSEY. Born, Plainfield, New Jersey, September, 1896; owner of firm; member, Board of Managers, Plainfield Savings Bank; First Vice President, Queen City & Home Building & Loan Association, Plainfield, New Jersey, and Chairman of its Real Estate Committee; member, local, state, and national real estate organizations and also the local, state, and national insurance organizations; Treasurer, Union County Association of Underwriters; Director, Chamber of Commerce, City of Plainfield; Director, Plainfield Title and Mortgage Guaranty Company; one of the Commissioners of Assessments, City of Plainfield; actively engaged in the operation of the business since the death of father in 1916, handling all types of real estate management, with perhaps the exception of industrial properties; institutional clients include Prudential Insurance Company of America, The Equitable Life Assurance Society of the United States, Home Owners' Loan Corporation, Department of Banking & Insurance of the State of New Jersey, Queen City & Home Building & Loan Association, Plainfield, Plainfield Savings Bank, Somerville Savings Bank, Somerville, New Jersey, and Mortgage Commission of the State of New York and its subsidiaries.

ALEXANDER SUMMER, TEANECK, NEW JERSEY. Born, New York City, November, 1903; President, Alexander Summer, Inc.; member, Teaneck Board of Realtors, Inc.; member, North Hudson Real Estate Board; member, Hackensack Real Estate Board; Past President, Teaneck Board of Realtors, Inc.; Treasurer for second term, New Jersey Association of Real Estate Boards; attended Columbia University; started in the real estate business with the firm of Slawson & Hobbs, New York City, in 1923; in February, 1925, became associated with Hallberg & Everett, Bogota, New Jersey, as Sales Manager; eight years later started own business; now manages over fifty apartment house and income buildings, as well as a large number of one- and two-family houses; institutional clients include The Prudential Insurance Company of America, The Equitable Life Assurance Society of the United States, Fidelity Union Trust Company, Home Owners' Loan Corporation, National Newark and Essex Banking Company, Amalgamated Building and Loan Association, Tenth Ward Building and Loan Association, Millwood Realty Company, Investors Title and Mortgage

Guaranty Company, Paterson Mortgage and Title Guaranty Company, State Realty Company, National State Bank, Provident Institution for Savings, Newark Eye & Ear Infirmary, Saphil, Inc., Borough of Cresskill, and Landscape Homes, Inc.

LEONARD J. ZEHNBAUER, UNION, NEW JERSEY. Born, Jersey City, New Jersey, October, 1888; Secretary, New Suburb Development Co. Inc.; President, Elizabeth Real Estate Board; professional territory covers northern New Jersey; fourteen years' experience in real estate management; experienced in the control of one-family dwellings, apartments, office buildings, and farms.

BYRON JENKINS, VENTNOR CITY, NEW JERSEY. Born, Glassboro, New Jersey, February, 1892; owner of firm; Director, Ventnor City National Bank; Ventnor City Treasurer; President, Atlantic City Real Estate Board, 1930; member, New Jersey Association Real Estate Appraisal Commission, 1930; member, New Jersey Chapter, The Institute of Real Estate Management; attended Wharton School, University of Pennsylvania, for two years; twenty-five years' real estate experience in construction, appraising, and management of one-family dwellings and apartment houses; institutional clients include Ventnor City National Bank, Department of Banking & Insurance, State of New Jersey, Fidelity-Philadelphia Trust Company, Forty Eight Hundred Three Company, and J. Edward Lutz & Sons.

HERMAN A. ACKER, NEW YORK, NEW YORK. Born, New York City, June, 1883; President, Herman A. Acker Corporation; member and Past President, Real Estate Board of the Bronx, Inc.; Member, American Institute of Real Estate Appraisers; Past President, Real Estate Association of the State of New York; professional territory covers the Bronx and Westchester Counties; twenty years' experience in real estate management, including business property and from two- to seventeen-story apartment buildings containing from two to 278 families.

CLEMENT E. MEROWIT, NEW YORK, NEW YORK. Born, New York City, November, 1902; President, Clement E. Merowit & Co., Inc.; member, Governing Council, The Institute of Real Estate Management; Chairman, Committee for Less Noise, Real Estate Board of New York, since August, 1935; Sponsor and Director, Residents Voluntary Committee for Noise Abatement, New York, since May, 1935; Member, Management Committee of Citizens' Housing Council, New York, 1937-1938; member, Zoning Committee, Real Estate Board of New York, 1936-1937; member, Research Committee, Real Estate Board of New York, 1935; graduate Cornell University, 1924, with B.A. degree; entered the field of design and construction of apartment houses in July, 1924, after an apprenticeship as assistant construction superintendent on a large enterprise; began building by own firm in February, 1925, erecting and operating a number of large elevator apartment buildings; literary contributions include "Tenant Ill-Will and How to Gain It!", published originally in the *New York World-Telegram*, July 2, 1936, then in *The Journal of Real Estate Management*, November, 1936; "Human Relations in Housing," *The Journal of Real Estate Management*, August, 1937; "The Technique of Handling Multi-Residential Tenants," employed as a text by the School of Commerce, Young Men's Christian Association, Chicago; "An Objectively Drawn Lease Form," *The Journal of Real Estate Management*, May, 1937; a series of five articles on tenant and personnel relations, *Buildings and Building Management*, September, October, November, and December, 1937, and January, 1938; various addresses given on real estate subjects; institutional clients include New York Dock Trade Facilities Corporation and New York Life Insurance Company.

WM. HENRY GORSLINE, JR., ROCHESTER, NEW YORK. Born, Rochester, New York, November, 1908; Assistant to the head of the property management concern of William H. Gorsline; member, Statistical Committee, Rochester Chamber of Commerce; member, 1938 Experience Exchange Committee, The Institute of Real Estate Management; President, newly organized Building Managers Association of Rochester, Inc., an affiliate of the National Association of Building Owners and Managers; B.A. degree, Dartmouth College; C.E. degree, Thayer School of Civil Engineering; attended both of the Institute's Case-Study Courses in Property Management at the University of Chicago in 1936 and Real Estate Appraisal I presented by the American Institute of Real Estate Appraisers at Columbia University in 1937; attended University of Rochester Extension Course in "Investment Management," 1936-1937; entered real estate business as property inspector in 1932 and engaged in the management of properties in the spring of 1933; institutional clients include Albany Savings Bank, Rochester Savings Bank, University of Rochester, Board of Foreign Missions of the Presbyterian Church in the U.S.A., and estates and individuals, comprising all types of properties (houses, blocks, apartments, commercial properties, and a thirteen-story office building), having in excess of 1,200 units in 200 properties.

A. R. RITZMAN, AKRON, OHIO. Born,

Akron, Ohio, January, 1887; President and General Manager, The Heminger-Ritzman Company; member, Ohio Board of Real Estate Examiners; served twenty years on the Board of Education, thirteen years in Kenmore, Ohio, and seven years in Akron; member for three years, Executive Committee, and Chairman, Appraisal Committee, the Akron Real Estate Board; President, Akron Real Estate Board, 1926; Vice President, Ohio Association of Real Estate Boards, 1931-1933; President, Ohio Real Estate Association, 1936; Chairman, Standard Forms Committee, Ohio Association of Real Estate Boards, 1931-1932; Member, American Institute of Real Estate Appraisers; twenty-one years' experience in real estate, consisting of eight years as Treasurer and Trust Officer of the Commercial Bank and Trust Company, Akron, in charge of the mortgage loan department and ten years as Vice President and General Manager and three years as President of The Heminger-Ritzman Company, negotiating mortgages on residential properties; institutional clients include The Wayne Building & Loan Company, Wooster, Ohio, Tuscarawas Savings & Loan Company, New Philadelphia, Ohio, Metropolitan Service Corporation, Newark, New Jersey, and Home Owners' Loan Corporation.

ROBERT A. CLINE, CINCINNATI, OHIO. Born, Cincinnati, Ohio, May, 1894; President, Robert A. Cline, Inc.; Vice President and Director, The Guardian Bank and Savings Company; Director, The Lincoln National Bank; Director, Cincinnati Chamber of Commerce; Director, The Better Business Bureau; Director, The Bureau of Governmental Research; Vice President and Director, The Haberer Realty Company; Director, The Lockland Realty and Building Company; graduate, Kenyon College, Ganbier, Ohio, 1916; entered real estate business in 1921; incorporated in 1925; managed property since 1922; institutional clients include The Lincoln National Bank, Cincinnati, The American Security and Trust Company, Washington, D. C., The Peoples Liberty Bank and Trust Company, Covington, Kentucky, The Prudential Insurance Company of America, The Penn Mutual Life Insurance Company, and The Phœnix Mutual Life Insurance Company.

LEO V. DU BOIS, CINCINNATI, OHIO. Born, New Castle, Pennsylvania, February, 1896; Assistant Treasurer and Assistant City Sales Manager in charge of commercial leasing, The Fred'k A. Schmidt Co.; Past President, Cincinnati Building Owners & Managers Association, Inc.; Past Chairman, Property Management Division, National Association of Real Estate Boards; degree of law; member of Ohio Bar Association since 1921; fifteen years with The Fred'k A. Schmidt Co., first ten years in charge of all leasing in connection with property management controlled by the company; Executive Secretary, Cincinnati Building Owners & Managers Association, Inc., the two years prior to association with The Fred'k A. Schmidt Co.; institutional clients include The Procter & Gamble Company, The Central Trust Company, and the Metropolitan Life Insurance Company.

CARL A. MAYER, CINCINNATI, OHIO. Born, Cincinnati, Ohio, June, 1910; Partner, Theodore Mayer & Bro.; Director, Cincinnati Building Owners and Managers Association, Inc.; Executive Manager, Cincinnati Doctors Building Company; President, Newmayer, Inc.; Chairman, Management Division, Ohio Real Estate Association, 1934-1936; seven years' specialized experience in managing, selling, leasing, and surveying business and industrial property, including office buildings, loft buildings, parking garages, etc.; author of articles on "Business Property Briefs"; institutional clients include L. & N. R. R. Co., Federal Union Life Insurance Company, Western & Southern Life Insurance Company, Ohio State Life Insurance Company, Peoples Bank & Savings Company, Southern Ohio Savings Bank & Trust Company, Lincoln National Bank, and Department of Insurance, State of Ohio.

LEWIS A. WHITE, CINCINNATI, OHIO. Born, Cincinnati, Ohio, September, 1902; Manager, Real Estate and Mortgage Loan Departments, The Title Guarantee and Trust Company; member, Cincinnait Real Estate Board; member, Ohio Real Estate Association; former Vice President, The Apartment House Association of Ohio; former Vice President, The Garit Corporation; educated, University of Cincinnati, Ohio State University, and Kentucky State University; thirteen years' experience in buying, selling, managing, and financing of all forms of real estate, specializing in the financing and managing of large apartment units; institutional clients include several large insurance companies, Home Owners' Loan Corporation, and several other institutions.

CARLTON SCHULTZ, CLEVELAND, OHIO. Born, Elyria, Ohio, July, 1888; President, Carlton Schultz Management, Inc.; President, Forest City Federal Savings & Loan Association; President, Carlton Schultz Investment Co.; President, City Realty, Inc.; member, Valuation Committee, Cleveland Real Estate Board, 1938; member, Board of Governors, Mortgage Bankers Association of Cleveland, 1938; Vice President, Great Lakes Region, The Institute of Real Estate Management, 1937 and 1938; Member, American Institute of Real Estate Appraisers; graduate, Western Reserve Law School, Cleveland, Ohio, LL.B. degree; specializes in acting as consultant in large developments throughout the county;

special lecturer, University of Michigan Real Estate Course, 1933; faculty member, Case-Study Courses presented by The Institute of Real Estate Management, University of Chicago, 1936; addresses delivered at national, state, and local conventions and real estate board meetings; published many technical articles on real estate over a long period of years and now publishes a monthly real estate letter known as *This Month;* manages institutionally owned properties throughout Greater Cleveland; these properties include houses, stores, apartment buildings, and office buildings; institutional clients include Midland Mutual Life Insurance Company, Columbus, Ohio, The Maccabees, Detroit, Michigan, RKO, New York City, The Minster Loan & Savings Company, Minster, Ohio, The Forman Realty Trust Company, Chicago, Illinois, First Morse Realty Company, New York City, and The Kresge Company, Detroit, Michigan.

ARTHUR E. WADE, CLEVELAND, OHIO. Born, Cleveland, Ohio, May, 1910; Manager, Property Division, The Land Title Guarantee & Trust Company; graduate, Case School of Applied Science, B.S. degree; four years' experience in the management field, handling single-, two-family, commercial, semi-commercial, and apartment buildings; institutional clients include The Equitable Life Assurance Society of the United States, The A. M. McGregor Home, New York Life Insurance Company, and The Prudential Insurance Company of America.

HAYDEN EDWARDS, COLUMBUS, OHIO. Born, Jackson County, Ohio, July, 1895; President, Hayden Edwards Co., Inc.; member, Columbus Real Estate Board; prior to the War employed by Frank L. Packard, well-known architect at Columbus, now deceased; on returning to Columbus after the War, developed a general real estate brokerage and construction business, being continuously engaged for nineteen years; now conducts real estate management, first mortgage loan, and general brokerage business; authorized mortgage loan solicitor for the Mortgage Loan Department of The Prudential Insurance Company of America, Newark, New Jersey, and management and sales agent for part of the property owned by the insurance company in Columbus.

EDWARD WATTERS, TULSA, OKLAHOMA. Born, County Tyrone, Northern Ireland, June, 1872; owner of firm; Director, Tulsa Civitan Club; Director, Oklahoma Real Estate Association; former Director, Tulsa Real Estate Board; attended Royal School, Dungannon, until migration to Baltimore, Maryland, August, 1889; attended public and private schools in Baltimore, including a course in architectural drawing in the Maryland School of Art and Design and a business course; attended a number of courses in real estate appraising, selling, etc. and a course in public speaking since coming to Tulsa; actively engaged in the real estate business since 1921, first as a builder of homes and as a broker; in the management business, handling mostly individual residences for local and out-of-town owners, since 1926, also manages a number of business properties, including one trust estate and the real estate holdings in Tulsa of the Jefferson Standard Life Insurance Company.

JAMES R. HAIGHT, PORTLAND, OREGON. Born, Burlington, Kansas, December, 1885; President, Consolidated, Inc.; President, Far West Realty Company; President, Stadium Hotel, Inc.; President, Haight Realty Company; Secretary, Mineralized Cell; Director, Apartment House Association; Director, Metropolitan Association; Director, former Vice President, and former member, Appraisal Committee, Portland Realty Board; attended military school for two years and then business college; President, State Bank in Oklahoma in 1909; moved to Portland in 1912 and bought, sold, and built mostly on own account; found management necessary for profitable operation, so established a management department and took over the management of property at the request of acquaintances; handles apartments, hotels, office buildings, general business property, farms, and residences.

WESLEY R. MASTEN, BETHLEHEM, PENNSYLVANIA. Born, New Hope, Pennsylvania, July, 1894; Secretary and Assistant Treasurer, W. C. Bader Company, Inc.; Secretary, Pembroke Development Company; Secretary, Pembroke Sales Corporation; Treasurer, Children's Home of Bethlehem and Allentown, Pennsylvania; associate member, Bethlehem Real Estate Board; professional territory covers Bethlehem and vicinity; graduate, business college; fourteen years' experience in real estate management; in the management department of Bethlehem Securities Company (now Bethlehem Steel Realty Corporation) from 1924 to 1933; in charge of real estate, First National Bank & Trust Company, Bethlehem, Pennsylvania, 1933 to 1937; management experience includes executive control over dwellings, apartment buildings, stores, and office buildings.

BOYD T. BARNARD, PHILADELPHIA, PENNSYLVANIA. Born, Middletown, Indiana, October, 1895; General Partner, Jackson-Cross Company; Director, First Mortgage Corporation; Director, Philadelphia Real Estate Board; Member, American Institute of Real Estate Appraisers; representative, American Institute of Real Estate Appraisers at the meeting of the Perma-

nent Committee of The International Federation of Surveyors in Paris, July, 1937; graduate, Swarthmore College, B.A. degree; twenty years' general experience, including apartment house and office building management; institutional clients include Home Life Insurance Company, Provident Mutual Life Insurance Company, Fidelity Mutual Life Insurance Company, Western Saving Fund Society, Philadelphia Saving Fund Society, Pennsylvania Company, Land Title Bank and Trust Company, Corn Exchange Bank and Trust Company, First National Bank, and John Wanamaker, Philadelphia.

CHESTER J. CINCOTTA, PHILADELPHIA, PENNSYLVANIA. Born, Troy, New York, June, 1893; Vice President, Albert M. Greenfield & Co.; active member, Philadelphia Real Estate Board; professional territory covers Philadelphia, Pennsylvania, New York City, Newark, New Jersey, Atlantic City, New Jersey, and Pittsburgh, Pennsylvania; attended Real Estate and Law Course, Drexel Institute; twenty-six years' experience in the real estate field; twenty years' experience in real estate management; in charge of management and leasing, covering all types of property, including office buildings, apartments, houses, and commercial and industrial property.

HERMAN F. DORNHEIM, PHILADELPHIA, PENNSYLVANIA. Born, Tremont, Pennsylvania, November, 1899; vice president, William I. Mirkil Co.; active member, Philadelphia Real Estate Board; professional territory covers Pennsylvania and New Jersey; graduate, Frankford High School, Philadelphia; fifteen years' experience in the real estate field; twelve years' experience in real estate management; rental and management agent for office buildings and manufacturing, loft, and industrial buildings.

REYNOLD H. GREENBERG, PHILADELPHIA, PENNSYLVANIA. Born, Baltimore, Maryland, April, 1899; Secretary and Treasurer, Joseph J. and Reynold H. Greenberg, Inc.; President, Solidarity Building & Loan Association; President, Wilkie-Buick Company; President, Broad and Glenwood Realty Company; Director of a number of other realty companies; graduate, Baltimore City College; immediately after the World War in 1918 entered the real estate business in Philadelphia in association with brother, Joseph J. Greenberg, in 1926 entered into partnership with him, and in 1930 organized the corporation of Joseph J. and Reynold H. Greenburg, Inc.; twenty years' real estate experience, many years of which were spent in the erection, leasing, and management of large industrial and commercial properties; particularly active in the erection of automobile sales, service, and warehousing buildings for practically every large automobile manufacturer in the country; institutional clients include The Equitable Life Assurance Society of the United States, Mutual Life Assurance Society of New York, The Fidelity Mutual Life Insurance Company, The Provident Mutual Life Insurance Company, The Philadelphia Saving Fund Society, The Fidelity-Philadelphia Trust Company, The Pennsylvania Company, Philadelphia, The Baltimore and Ohio Railroad Company, etc.

SAMUEL T. HALL, PHILADELPHIA, PENNSYLVANIA. Born, Philadelphia, Pennsylvania, April, 1891; Executive Vice President, William I. Mirkil Co.; active member and former President, Philadelphia Real Estate Board; professional territory covers Pennsylvania and New Jersey; conducted real estate business under name of Samuel T. Hall, Inc., until 1937 when it was consolidated with William I. Mirkil Co.; former Director, National Association of Real Estate Boards; Regional Vice Chairman, Brokers Division; Member, American Institute of Real Estate Appraisers; thirty years' experience in the real estate field; twenty years' experience in real estate management; management experience includes office buildings, commercial and industrial properties, apartment houses, theatres, stores, dwellings, and country estates; institutional clients include The Prudential Insurance Company of America, Guaranty Trust Company of New York, Philadelphia Saving Fund Society; Land Title Bank and Trust Company, City of Philadelphia, Trustee, Girard Trust Company, Philadelphia National Bank, Fidelity-Philadelphia Trust Company, and Provident Mutual Life Insurance Company.

ROY A. HEYMANN, PHILADELPHIA, PENNSYLVANIA. Born, Philadelphia, Pennsylvania, December, 1884; active member, Philadelphia Real Estate Board; professional territory covers Philadelphia, as well as states of Pennsylvania, New York, Illinois, Michigan, Florida, and New Jersey; attended Claghorn Public School, DeLancey School, and Wharton School of the University of Pennsylvania; thirty-three years' experience in the real estate field; twenty years' experience in real estate management.

MEREDITH M. JACK, PHILADELPHIA, PENNSYLVANIA. Born, Wallingford, Pennsylvania, January, 1897; Vice President, William I. Mirkil Co.; Philadelphia agent for Harvard College; exclusive agent for the Presser Foundation; Philadelphia agent for Shaw-Walker Company; active member, former President, and one of the founders of The Executives Association of Philadelphia; active member, Philadelphia Real Estate Board; professional territory covers all of Philadelphia, particularly the central section and the

Chestnut Hill suburban section, and all suburban residential areas of Montgomery County, Delaware County, and Chester County; graduate, The Episcopal Academy, 1915; graduate, University of Pennsylvania Dental School with degree of D.D.S. and received certificate to practice in the commonwealth of Pennsylvania; eleven years' experience in the real estate field; ten years' experience in real estate management; for the past ten years engaged in managing particularly office buildings, theatre buildings, retail store properties, apartment hotels, and small apartment houses.

C. HARRY JOHNSON, PHILADELPHIA, PENNSYLVANIA. Born, Philadelphia, Pennsylvania, December, 1892; owner of firm; member, Philadelphia Real Estate Board; Member, American Institute of Real Estate Appraisers; twenty-seven years' experience in real estate management.

JOHN G. KECK, PHILADELPHIA, PENNSYLVANIA. Born, Philadelphia, Pennsylvania, October, 1900; President and Treasurer, John G. Keck & Co.; Secretary, Varsity Building and Loan Association; Manager, Ridge Avenue Building and Loan Association; Treasurer, Victory Building and Loan Association; member, Central and North Philadelphia Real Estate Boards; professional territory covers Philadelphia and suburbs; attended Temple University, 1918, Real Estate, Conveyancing, and Business Law; also Temple University, 1935, Appraisals; completed Case-Study Courses in Real Estate Appraisal offered by the American Institute of Real Estate Appraisers at Columbia University, 1937; lecturer; Member, American Institute of Real Estate Appraisers; twenty-two years' experience in the real estate management field; management experience includes dwellings, apartment houses, stores, factories, etc.

WILLIAM I. MIRKIL, PHILADELPHIA, PENNSYLVANIA. Born, Chester, Pennsylvania, October, 1892; President, William I. Mirkil Co.; member, Board of Governors, Philadelphia Real Estate Board; Central Atlantic Regional Vice President and Governing Councillor, The Institute of Real Estate Management, and President of its Philadelphia Chapter; Member, American Instiute of Real Estate Appraisers; member, Society of Residential Appraisers; graduate, University of Pennsylvania; actively engaged in the real estate buisness for eighteen years; institutional clients include The Prudential Insurance Company of America, Land Title Bank & Trust Company, The Pennsylvania Company for Insurances on Lives and Granting Annuities, Fidelity-Philadelphia Trust Company, Guaranty Trust Company of New York, City of Philadelphia, Trustee, Harvard College, Provident Trust Company, Philadelphia Saving Fund Society, Provident Mutual Life Insurance Company, Fidelity Mutual Life Insurance Company, Girard Trust Company, and the Penn Mutual Life Insurance Company.

THOMAS CALVIN PILLION, PHILADELPHIA, PENNSYLVANIA. Born, Philadelphia, Pennsylvania, August, 1903; Assistant Vice President, Albert M. Greenfield & Co.; active member, Philadelphia Real Estate Board; professional territory covers Philadelphia, Pennsylvania, Newark, New Jersey, New York City, Pittsburgh, Pennsylvania, Atlantic City, New Jersey; high school and college education; fourteen years' experience in the real estate field; twelve years' experience in real estate management; in complete charge of leasing and management of all of the apartment houses and dwellings managed by Albert M. Greenfield & Co.; also in charge of all commercial leasing.

GLYNDON PRIESTMAN, GERMANTOWN, PHILADELPHIA, PENNSYLVANIA. Born, Hull, England, July, 1884; President, Priestman-Helmetag Co.; Director and former President, Philadelphia Real Estate Board; Conveyancer and Director, Market Square Building & Loan Association; Conveyancer and Director, Mutual Savings Building & Loan Association; B.S. degree, Haverford College, 1905; actively engaged as a real estate broker since 1908; wrote "How to Buy Your Home," a pamphlet which was published in 1923 by the Curtis Publishing Co.

WILLIAM PUGH, PHILADELPHIA, PENNSYLVANIA. Born, Philadelphia, Pennsylvania, October, 1901; in business under own name; active member, Philadelphia Real Estate Board; professional territory covers Philadelphia and suburbs; attended Dartmouth College; eighteen years' experience in the real estate field; eight years' experience in real estate management; institutional clients include Western Saving Fund Society, Land Title Bank and Trust Company, The Pennsylvania Company, Forty-fourth Ward Building & Loan Association, and Fifty-second and Market Building & Loan Association.

RICHARD J. SELTZER, PHILADELPHIA, PENNSYLVANIA. Born, Philadelphia, Pennsylvania, July, 1888; member, Philadelphia Real Estate Board; professional territory covers Philadelphia and environs; graduate, high school; studied eight years in various night schools and law for four years in the office of J. and E. W. Sparhawk, Philadelphia; thirty years' experience in real estate management and in almost every branch of the real estate business, constructing, renovizing, managing, and selling commercial properties, apartment buildings, and residences.

NORMAN WEISS, PHILADELPHIA, PENNSYLVANIA. Born, Johnsonburg, Pennsylvania, February, 1901; partner of Heymann & Bro.; broker member, Philadelphia Real Estate Board; professional territory covers city of Philadelphia; attended Pennsylvania State College; graduate, University of Pennsylvania, B.S. degree in Economics; lecturer on building management; fifteen years' experience in the real estate field; fifteen years' experience in real estate management; experienced primarily with the management of commercial real estate with special attention to office building management and leases; at the present time supervises eight commercial office buildings, two specialized medical buildings, and a large group of diversified real estate, including many of Philadelphia's most valuable central store properties, loft buildings, etc.

ROBERT M. WILSON, PHILADELPHIA, PENNSYLVANIA. Born, Milton, Vermont, September, 1891; Vice President and Treasurer, Albert M. Greenfield & Co.; Vice President and Chairman, Finance Committee, Pennsylvania Real Estate Association; Director and Chairman, Finance Committee, Philadelphia Real Estate Board; Chairman, Finance Committee, Philadelphia Real Estate Board Magazine; Past President, Optimist Club of Philadelphia; Director, Almar Building & Loan Association; Director, Fred G. Nixon-Nirdlinger Building & Loan Association; Director, James F. Bradley Building & Loan Association; Director, Lillian Building & Loan Association; Director, Mt. Vernon Building & Loan Association; Secretary and Treasurer, Philadelphia Chapter, The Institute of Real Estate Management; graduate, Evening School of Accounts and Finance, University of Pennsylvania, 1915; after graduation from the University of Pennsylvania, prepared young men for the University at Brown Preparatory School in Philadelphia, teaching Commercial Law, Accounting, Civil Government, and Economics; associated with Albert M. Greenfield & Co. for seventeen years, originally as auditor, then Assistant Secretary and Assistant Treasurer, then Secretary and Treasurer, now Vice President and Treasurer in charge of accounting, financial, and personnel work; addressed the Philadelphia Real Estate Board, the Building Owners & Managers Association, and the Philadelphia Corporate Trust Officers Association on management subjects; manages real estate for practically every financial institution in Philadelphia owning real estate, including trust companies, saving fund societies, and insurance companies, as well as hundreds of individuals and estates in Philadelphia and institutions and individuals in other cities.

J. W. CREE, JR., PITTSBURGH, PENNSYLVANIA. Born, Meadville, Pennsylvania, May, 1875; Manager, Denny Estate; Partner, Aull and Martin; Director, Commonwealth Trust Company of Pittsburgh; Trustee, Dollar Savings Bank, Pittsburgh; active member, Pittsburgh Real Estate Board; managing executive of Denny Estate for twenty-six years; Member, American Institute of Real Estate Appraisers; professional territory covers Pittsburgh and vicinity; attended Pennsylvania State College; lectured on real estate subjects at University of Pittsburgh; thirty-four years' experience in real estate management.

ROBERT L. CASPER, WILKES-BARRE, PENNSYLVANIA. Born, Wilkes-Barre, Pennsylvania, July, 1912; Partner, Lewith & Freeman; Past President, Greater Wilkes-Barre Real Estate Board; Director, Luzerne County Property Owners Association; Vice President, Young Men's Division, Wyoming Valley Chamber of Commerce; attended Cornell University; also attended the Case-Study Courses in Real Estate Management sponsored by the Institute at the Universiy of Chicago during 1936; actively engaged in the real estate business since 1931, starting with Lewith & Freeman at that time; clients include three life insurance companies, three banks, one building and loan association, two mortgage companies, several large estates, any many individuals.

FRED B. WETZEL, WILLIAMSPORT, PENNSYLVANIA. Born, Williamsport, Pennsylvania, October, 1896; President, Fred B. Wetzel, Inc.; Associate Member, American Institute of Real Estate Appraisers; Past President, Williamsport Real Estate Board; active as a real estate broker since 1923 and associated with the supervision and construction of 175 homes; active during the past four years in the management of over 250 properties, including the largest office building in the city, apartment houses, and one- and two-family houses; Contract Management and Sales Broker for Home Owners' Loan Corporation and the First National Bank of Williamsport and Liquidating Trustee for a closed bank and the Provident Mutual Life Insurance Company of Philadelphia.

WILLIAM D. GALBREATH, MEMPHIS, TENNESSEE. Born, Memphis, Tennessee, August, 1908; Senior Partner and General Manager, Percy Galbreath & Son; former Secretary, Real Estate Board of Memphis, and First Vice President, 1937; graduate, Vanderbilt University, B.A. degree, 1930; opened management department of firm shortly after entering the business in 1930; actively engaged in the Property Management Division since 1930 with experience covering commercial, apartment, and residential properties; manages property for a number of individuals

and estates in addition to the following institutional owners: The Equitable Life Assurance Society of the United States, Columbian Mutual Life Insurance Company, Trust Department of the First National Bank of Memphis, Home Owners' Loan Corporation, DeSoto Mortgage Company, and the Standard Life Insurance Company of the South.

JOSEPH B. GILLESPIE, NASHVILLE, TENNESSEE. Born, Vicksburg, Mississippi, November, 1904; President, Geo. R. Gillespie Co., Inc.; educated primarily in the Nashville public schools, followed by a business course; later entered a law class conducted at the local Y.M.C.A. in connection with Vanderbilt University; actively engaged in the real estate business fourteen years; real estate activities confined mainly to the leasing and management of downtown business properties.

J. HAL BROWN, AMARILLO, TEXAS. Born, Sheldon, Missouri, February, 1904; Partner and Manager, Real Estate Department, Askew & Brown; eight years' real estate experience with special emphasis on the management of office buildings, etc.; attended two of the Case-Study Courses in Real Estate Appraisal presented by the American Institute of Real Estate Appraisers at the University of Chicago, 1936; institutional clients include Standard Savings & Loan Association, Detroit, Michigan, American National Insurance Company, Galveston, Texas, Pasumpsic Savings Bank, St. Johnsbury, Vermont, and Dallas National Bank, Dallas, Texas, as well as numerous individuals.

F. ORIN WOODBURY, SALT LAKE CITY, UTAH. Born, Salt Lake City, Utah, May, 1898; President and Manager, Woodbury Corporation; Chairman, Property Management Division, Salt Lake City Real Estate Board; Director, National Association of Real Estate Boards; President, Home Benefit Building Society; Secretary, Salt Lake City Rotary Club; member, Advisory Council, Salt Lake City Chamber of Commerce; Past President, Utah State Realty Association; entered the real estate business April 1, 1919, constantly managing, appraising, building, and selling since that time except two years spent travelling abroad; a member of the Salt Lake City Real Estate Board's original Education Committee that introduced a course in real estate practice at the University of Utah; institutional clients include Zion's Savings Bank & Trust Company, L. D. S. (Mormon) Church, Deseret Federal Savings & Loan Association, Utah Assets Corporation, Clayton Investment Company, Home Benefit Building Society, Home Building & Loan Association, Intermountain Building & Loan Company, and Home Owners' Loan Corporation.

MORTON G. THALHIMER, RICHMOND, VIRGINIA. Born, Richmond, Virginia, October, 1889; President, Morton G. Thalhimer, Inc.; President, Neighborhood Theatre, Inc. (operating twenty-two theatres); Director, Lawyers Title Insurance Corporation; Director, Federal Corporation; Director, Fireman's Mutual Aid Association; Past President, Richmond Real Estate Exchange; Past President, Virginia Real Estate Association; member, Board of Directors, National Association of Real Estate Boards; member, Governing Council, American Institute of Real Estate Appraisers; graduate, Wharton School, University of Pennsylvania; twenty-six years' experience in management and brokerage; faculty member, Institute's Case-Study Courses in Real Estate Management presented at the University of Chicago, 1936; lecturer, Appraisal Conference, University of Florida, 1937; institutional clients include State Planters Bank and Trust Company, Richmond, Life Insurance Company of Virginia, Richmond, Atlantic Life Insurance Company, Richmond, and others.

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Gentlemen:

Enclosed is my check in the amount of $..... Please send me Number....., Volume VI, and Number....., Volume V, of *The Journal of the American Institute of Real Estate Appraisers.*

Name.....

Street.....

City.....State.....